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Industrial Organization; Price and Production Policies; Business Methods

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Labor and Industrial Relations

CARL COPPING PLEHN

Twenty-fifth President of the American Economic Association, 1923

Carl Copping Plehn was born in Providence, Rhode Island, January 20, 1867. After receiving his A.B. degree at Brown University in 1889 (LL.D. 1914) he went to Germany to study and earned his Ph.D. degree at the University of Göttingen in 1891. Returning to this country he served as professor of history and political science at Middlebury College, 1892-93; then moved to the University of California where he was assistant professor of political economy, 1893-96, associate professor of finance and statistics, 1896-1909, Flood Professor of finance, 1909-37, and professor emeritus after July 1, 1937, until his death on July 21, 1945. From 1898 to 1910 he served as dean of the College of Commerce. In 1924 he was faculty research lecturer.

In addition to his academic work Professor Plehn was active in public service. He served as Supervisor of the Census of the 1st District California in 1900; was chief statistician with the Philippine Commission, 1900-01; member and secretary of the Commission on Revision of the Revenue Laws of California, 1905-11; and member of the National Committee on Inheritance Taxation, 1925. Professor Plehn was also active in the work of the American Economic Association, National Tax Association, and the American Statistical Association. His presidential address at the annual meeting of the A.E.A. held in Washington, 1923, was on "The Concept of Income as Recurrent Consumable Receipts."

Professor Plehn did not publish extensively. His best known work was a small text on *Introduction to Public Finance*, 1895, 5th edition, 1926. Other contributions were *Revenue Systems of State and Local Government*, 1907, and *Government Finance*, 1915. The title of his doctoral dissertation was "Das Kreditwesen der Staaten und Städte der Nord-Amerikanischen Union in Seiner Historischen Entwickelung."

Number 25 of a series of photographs of past presidents of the Association.

Carl C. Plehn

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THE PROBLEM OF CAPITAL ACCUMULATION

By EVSEY D. DOMAR*

I

Capital formation has now reached a gross annual rate of some thirty-six billion dollars. A somewhat smaller amount would have been less inflationary, but aside from this inconvenience which we still hope to be temporary, there should be every reason for congratulations: both the (not entirely expected) prosperity which this capital formation has given rise to and the resulting increase in our productive capacity should certainly be welcome. Yet looking at this remarkable amount, many an economist has wondered how much longer the economy will be able to absorb capital at this rapid rate, and what will happen when a drastic fall in capital formation takes place.

Implicit in this worry is the belief that the possibilities of the so-called deepening of capital (in the sense of an increasing ratio of capital to output) are limited. Therefore the amount of capital that the economy can absorb, at a given income level and over a given period of time, is limited as well. The more rapidly it accumulates, the sooner investment opportunities are exhausted and a depression ensues.

This is the essence of a view, specifically rejected by Knight and Simons, but widely accepted in the economic literature, particularly in its Marxist, underconsumptionist and Keynesian branches.[1] In its most definite and explicit form it is based on the assumption that there exists a fairly stable relationship between a given amount of (annual) out-

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[1] Frank H. Knight, "Diminishing Returns from Investment," *Jour. Pol. Econ.*, Vol. 52 (Mar., 1944), pp. 26-47; Henry C. Simons, "Hansen on Fiscal Policy," *Jour. Pol. Econ.*, Vol. 50 (Apr., 1942), pp. 161-96; Alvin H. Hansen, *Fiscal Policy and Business Cycles* (New York, 1941) and *Economic Policy and Full Employment* (New York, 1947); R. F. Harrod, *The Trade Cycle* (Oxford, 1936); Nicholas Kaldor, "Stability and Full Employment," *Econ. Jour.*, Vol. 48 (Dec., 1938), pp. 642-57; Michal Kalecki, "Full Employment by Stimulating Private Investment." *Oxford Econ. Papers*, No. 7 (Mar., 1945), pp. 83-92, and "Three Ways to Full Employment," in *The Economics of Full Employment*, published by the Oxford Institute of Statistics (Oxford, 1944), pp. 39-58. Paul M. Sweezy, *The Theory of Capitalist Development* (New York, 1942). These are just a few examples.

put (or income) and the stock of capital needed to produce it. This assumption (used also in connection with the acceleration principle) may be definitely stated, as by Paul Sweezy and Harrod, or merely implied, as in the case of Hansen, but in one form or another it is essential to all these apprehensions regarding the depressing effects of capital accumulation.[2] For otherwise—if we join the company of Knight and Simons—investment opportunities are practically unlimited. While neither Knight nor Simons would guarantee a permanent prosperity, for an explanation of its end they would look to factors other than capital accumulation. Whether the latter should proceed at the rate of thirty-six billions or greater need not be of any great concern unless some other assumptions or some indirect effects are brought in.[3]

The reader now has a choice. If he accepts the Knight-Simons position, he can stop worrying about capital accumulation and spare himself the trouble of reading this paper. I have no empirical information with which to settle the issue here. The other view, which I myself am inclined to take, is the more pessimistic of the two. Shouldn't we—if only out of curiosity—look into it and see where it leads?

Our journey will be perilous because we shall try, so to speak, to isolate capital accumulation from other economic factors. There will be an artificial flavor to it because (this being a paper in economics) we shall introduce several simplifying assumptions. We shall assume that we deal with a private capitalist economy in which the government plays a minor role;[4] that the relative distribution of income between labor and capital remains unchanged; that reasonably small changes in interest rate will not greatly stimulate investment (a major heretical step); that our terms—such as investment and saving—are defined net of depreciation and similar charges; and that saving includes undistributed corporate profits. We shall add a few more assumptions as we go along. But due to the kindness and power of persuasion of the editor of this *Review*, our journey will not be as long as it might otherwise have been.

We have thus assumed, at least for the purpose of this discussion, that there exists a fairly stable ratio between annual output (or national income) and the capital stock needed for its production, this ratio to be indicated by the letter s.[5] While, strictly speaking, we shall treat s

[2] Not all capital formation represents accumulation. Depreciation, obsolescence, and similar charges should be subtracted.

[3] Knight recognizes that, other things remaining the same, accumulation of capital will gradually reduce its marginal rate of return. But such a process would be very gradual and hardly have much cyclical significance. Its unfavorable effects on investment could be counteracted by reducing the interest rate.

[4] This assumption will be removed when we come to questions of policy in Section III.

[5] The term "national income" is used in this paper in a broad sense. National product or some variation of it could be used as well.

as a given constant, it need not be so. It is certainly not the same among various firms and industries. The national average (if such exists) can be made a function of time, interest rate, or of something else. But it must have some stability, because if s can be anything, our argument falls through and we are back at the Knight-Simons position.

The assumption of a stable s is necessary but not sufficient for the purposes of the theory examined here. If, as investment opportunities disappear, the propensity to save obligingly drops as well, the fall in investment need not cause a reduction in income and employment. There is just a shift from a high investment to a high consumption economy. While such a shift requires considerable mobility of factors, and it is neither simple nor easy, the speed of the postwar reconversion has shown that it can be achieved without a major breakdown. A stable propensity to save, to be indicated by α, again need not imply a permanent constancy; it could also be made a function of certain variables. All we need here is its refusal to adjust itself to changes in the volume of investment, so as to assure continuous full employment.[6]

Granted a reasonable stability of s (the ratio of national income to capital stock), it follows that for any given level of income there exists some fairly determinable stock of capital needed to produce it, beyond which large scale investment will not be undertaken in order to increase output. It also follows that the faster capital accumulates, the sooner this saturation point will be reached (provided income remains the same). After it has been reached, investment will be undertaken only in response to various dynamic changes, such as the emergence of new methods of production and new products, population growth and movements, changes in tastes and habits, the appearance of new firms, etc.—which have been so well described by Hansen, Schumpeter, and others. These changes may alter the value of s, or more specifically may lower it and thus make more capital necessary. They may also break a "hole," so to speak, in the existing stock of capital by rendering a part of it useless. In any case, a relative shortage of capital is created, and so long as it persists—prosperity lasts. When the needed capital has been constructed, investment drops and depression begins.

But it is also possible that the stream of investment will raise national income (*via* the multiplier process) well above its original level. The gap between required and existing capital stock may then widen, at least for a while, before narrowing down, and thus give rise

[6] For a discussion of s and α, see my paper "Expansion and Employment," *Am. Econ. Rev.*, Vol. 37 (Mar., 1947), particularly pp. 42-44. No distinction is made here between the average and marginal α.

to additional investment, *via* the acceleration principle. A strict distinction between these two kinds of investment is hard to make even conceptually, let alone statistically. While some business cycle theories emphasize the spontaneous type (Hansen, Schumpeter), and others the induced one (Harrod), no one would deny the importance of either. It is possible to construct a theoretical model in which investment and income continuously re-enforce each other.[7] But such a model is apt to be unstable, and can hardly be relied on as a means of achieving a continuous prosperity.

This description of the end of prosperity, which has by now become fairly conventional, does not, however, answer one important question: *could* prosperity last longer? Suppose we are in a period when, due to a rapid accumulation of capital, investment opportunities are nearly exhausted and investment is about to drop off. And suppose also that investors are *somehow* (see Section III) persuaded to undertake sufficient investment to maintain the state of full employment for one more year (or some longer period). Will they be necessarily disappointed? Will they find themselves burdened with excessive and useless capital and therefore refuse to repeat the experiment once more?

Two cases should be distinguished here: (1) When income has remained constant. (2) When income has risen.

1. If income has not risen, the situation is not very cheerful. It is true that our economy does not consist of one industry in which only one firm produces one kind of a product. So it is possible that the newly constructed capital has somehow acquired the markets of older plants. The economy as a whole will possess excessive capital, but the resulting losses will not fall on "our" firms, who may be perfectly contented and therefore willing to try again. It is also possible that a change in s took place and that it was labor rather than capital that the new plants displaced.[8] But if the new capital could do all this, why was there a shortage of investment opportunities in the first place? We are coming rather close to the violation of our original assumption. Therefore, while not necessarily denying that new capital might sometimes emerge unscathed even in the absence of dynamic changes, we still have to conclude that the situation described here is too optimistic to be relied upon.

2. Our second case arises when income has increased. If this rise is sufficient (to be defined presently), there is no *a priori* reason why

[7] See for instance Case D in Paul A. Samuelson's "Interactions between the Multiplier Analysis and the Principle of Acceleration," *Rev. Econ. Statistics*, Vol. 21 (May, 1939), pp. 75-78.

[8] This contradicts our original assumption that full employment is maintained.

our or any other investors must necessarily be disappointed, provided their investments were made in the proper fields. The income elasticity of demand for goods in general is certainly positive. Therefore there must always exist some level of income at which the new plants can be profitably used without displacing an unreasonably large number of older ones. Our next step is therefore to inquire how high this income level should be and how fast national income should increase.

The reader has undoubtedly sensed already that this rate of growth is a function of two factors: the propensity to save—α and the ratio of output to capital—s. The higher is α, the larger must be the fraction of income invested (to maintain full employment), and the greater should be the subsequent rise in income. Similarly, the larger is s, the more output can be produced with a given amount of capital and the faster income should increase. Thus the required rate of growth of income is directly proportional to both α and s. If income is indicated by Y, the amount invested will be $Y\alpha$. Since each dollar of new capital increases possible annual output by s, the total increase in output which is required to utilize the new investment fully is $Y\alpha s$. To get a relative rate of growth (which is more meaningful), we divide the absolute rise in income by Y and get αs. *αs is the required rate of growth of income* which is needed to prevent an excessive accumulation of capital.[9]

Before any use is made of this result, the following qualifications are in order:

1. The problem was presented here in the simplest possible manner. No distinction was made between average and marginal propensities to save, and s was treated as an average applicable to the new investment as a whole. Also the usual lag between the disbursement of income during the construction of capital assets and their completion, has been disregarded. Nothing was said about the possible effects of relative price changes (or other factors) on the magnitudes of s and α. The removal or modification of these assumptions can lead to the building of all sorts of models which can be made as fancy and as complex as the reader desires. My own feeling is that at this stage the problem of capital accumulation needs more empirical data rather than further theorizing.

2. αs indicates the required rate of growth of income provided that no large amounts of unused capital exist at the beginning, or at

[9] If the reader is familiar with my earlier paper, *loc. cit.*, he may wonder regarding the difference between the rate of growth given there—$\alpha\sigma$ and the αs rate stated here in the text. $\alpha\sigma$ indicates the rate of growth of income necessary for the maintenance of full employment of *labor*. αs indicates that needed for a full utilization of *capital*. The essence of the problem is that s may be larger than σ.

least that they do not interfere with investment. If this is not so, a higher rate will be required until all capital is fully utilized.

3. In a large and complex economy like ours, existing capital is always replaced to some extent by newer plants (over and above depreciation), and some new investment is misdirected. This premature junking of undepreciated capital, if proceeding on a large scale, is socially wasteful and is likely to inhibit new investment. But a complete avoidance of this process in a dynamic society is both impossible and undesirable. To this extent and provided that new investment is not inhibited, some downward adjustment should be made in the required rate of growth (αs), but the magnitude of this adjustment is unfortunately unknown.

II

In the preceding section it was established that if national income grows at a (relative annual) rate of αs, no excessive accumulation of capital should take place. This rate αs should of course be interpreted as a very rough approximation, or still better as a range, both because of the qualifications just stated, and in view of the rather uncertain nature of s itself.[10] Our next question is: *can* income grow at this rate?

We should make a very clear distinction between *can* and *will*. If income cannot grow at the required rate, it clearly will not. But if it can, there is no assurance that it will. The failure to distinguish between these two aspects of the problem has been a source of considerable confusion.

Our question refers of course to real income; money income could be made to grow at almost any rate. It is doubtful if our society would desire to solve the problem of capital accumulation by continuous inflation. It is not entirely clear whether a relatively mild rise of prices, such as 2-3 per cent per year, can be contained within these limits once it is expected by the public, and we are not entirely sure that inflation will solve the problem in the first place.[11] For all these reasons, we shall reject the inflationary solution, and assume that a reasonably constant price level is maintained.

In a sense, the answer to our question is extremely simple. All we need is to obtain reasonably reliable estimates of α and s, compute their product and then compare the result with the maximum rate of growth which, in our opinion, the economy can achieve. As for the

[10] We should also take into account that the propensity to save is a very rough approximation of the fraction of national income invested in income-producing assets. The presence of government complicates the situation further.

[11] This depends on the relative movements of prices of capital goods and of output taken as a whole, as well as upon the strictness with which the concept of s is interpreted.

magnitude of α, many estimates are available, though it is not easy to decide which one to take. Perhaps some 10-12 per cent (including corporate saving) would not appear unreasonable as some sort of an average. We really don't know how the people will behave in a state of continuous full employment.[12] But very little information is available as yet regarding the value of s, both due to the inherent complexity and vagueness of this concept, but also because very few people have bothered to estimate it. A comprehensive study of capital requirements is now being conducted by W. W. Leontief.[13] Until his results become available, we have the choice of dropping the matter completely, guessing, or taking some very rough estimates, such as the ratio between national income and national wealth. An estimate of this ratio has been made recently by William J. Fellner for the period 1879-1938.[14] It has fluctuated from a high of some 39 per cent in the decade of 1879-86 to a low of some 30 per cent in 1909-18 (and also 1929-38) with a possible slight downward trend. These figures do not take into account, however, that throughout a good part of the period there were large amounts of unused capital. So an upward adjustment of an unknown magnitude has to be made, though it must be remembered that the presence of some unemployed capital is perfectly normal. If s should be in the vicinity of 35-40 per cent, and α equal to 10 or 12 per cent, the required rate of growth will be somewhere around 4 per cent and possibly higher. Over the same period of time, that is 1879-1938, the annual rate of growth of real income in the United States was something like 3.3 per cent.[15] If full employment had been continuously maintained, it would have probably been higher. But, on the other hand, a good part of this period had the advantage of rapid population growth on which we evidently cannot count in the future. At first glance therefore we could conclude that the required rate of growth was beyond our reach. Yet the crudeness of our approach, both theoretically and most of all statistically, has been such that a definite conclusion cannot be reached. A compound interest rate of growth, even as low as 2 per cent, cannot be maintained forever, but we are interested here not in the millennium but in the prospects for the next twenty to thirty years. And over this short period

[12] On the subject of a long-run propensity to save see the interesting essay by James S. Duesenberry, "Income-Consumption Relations and their Implications," *Income, Employment and Public Policy*, Essays in Honor of Alvin H. Hansen (New York, 1948), pp. 54-81.

[13] I understand that the Council of Economic Advisers is also studying the problem.

[14] See his *Monetary Policies and Full Employment* (Berkeley, 1946), p. 80. His figures were subsequently revised without affecting the main conclusions significantly. I am using here the reciprocals of his ratios.

[15] See my paper "The 'Burden' of the Debt and the National Income," *Am. Econ. Rev.*, Vol. 34 (Dec., 1944), particularly pp. 816-27.

a 3 per cent rate of growth is clearly not out of question, and—who knows, with full employment and without depressions—even a higher one can be achieved as well.

If these rough estimates do not provide us with a conclusive answer, a cursory examination of our business cycle history does not help much either. If a prosperity came to an end because national income *could not* grow sufficiently fast to prevent an excessive accumulation of capital, we should observe a severe shortage of labor and rapidly rising prices, a phenomenon apparently absent in 1907, 1929 and 1937. It is possible to argue that had those prosperities lasted another year or two, such a situation would have arisen, and that the entrepreneurs had foreseen that and therefore reduced their commitments beforehand. But without some proof, almost anything could be said just as well. The severe shortage of labor and rising prices do not seem to clip the wings of our present prosperity at all, though the easy money and credit situation may be a contributing factor here.

If we should decide that national income *can* grow at the required rate, it does not at all follow that it *will* actually do so. To confuse the two issues would show a sad lack of understanding of the nature of the capitalist society. The fact (if it is a fact) that if sufficient investment is forthcoming, national income will *not* be prevented by physical limitations from rising sufficiently high to make this investment profitable, is not a proof that the required investment will be undertaken in the first place. In a capitalist society, investment is influenced by a number of factors, some rational, others not. It depends to a great extent on various dynamic changes, because the most simple and obvious purpose of investment—the expansion of capacity in order to produce more goods—cannot be always relied upon, since there is no assurance that the demand of tomorrow will be greater than the demand of today.

III

Our approach to matters of policy will depend on our choice between the "can" and the "will" hypotheses. If we should decided that, with given α and s, the required rate of growth *cannot* be achieved because of physical limitations, the prospects of maintaining full employment over a prolonged period of time become bleak indeed. If saving is not invested, we have a depression today. If it is invested, there will be an excessive accumulation of capital tomorrow, and a depression the day after. It should be recognized, however, that the presence of frequent and sharp dynamic changes make excessive accumulation of capital less important: some firms and industries expand at the expense of others. Yet it is doubtful if a prosperity so based could last for more than a few years.

Under these circumstances, the most obvious and radical remedy consists in investing less and—if this is not to result in an immediate slump—in saving less; that is, in reducing the propensity to save. This by itself will of course not guarantee stability—witness the situation today when a lower propensity to save would intensify the inflation—but it would at least eliminate one source of trouble. The measures designed to reduce the propensity to save need not be discussed here. It is important to note, however, that a "pure" capitalist society is rather helpless in this respect and that government interference would be necessary.

The other alternative would be a reduction in s, that is, in developing those industries which require much capital and little labor per unit of output. This is, I believe, essentially a question of technology, and such industries may or may not appear, though relatively high wages and low interest rates should serve as encouraging factors. The utilization of atomic power seems to be an industry of this kind. On the other hand, the increasing demand for services points in the opposite direction.[16]

If, on the other hand, we decide that the required rate of growth *can* be achieved, new possibilities open up. As before, a reduction of propensity to save will be helpful: whatever investment happens to be available, a lower α will result in a higher national income. But the fundamental difference between the two cases should be clearly understood: in the present case, the excessive propensity to save, of which we have heard so much lately, is not excessive any more in relation to the capital requirements and to the growth potential of the economy, but only to the volume of investment as determined by existing institutional conditions. It is extremely regrettable, therefore, to solve the problem by a reduction of the propensity to save: if the public is *willing* to save a certain part of their income, and the required rate of growth *can* be achieved, why not concentrate our efforts to make this growth potential real?[17] This would be the path that any socialist society would undoubtedly take, but must we wait for that? The depression becomes now nothing else but a vast psychological phenomenon and any effort to "talk ourselves into prosperity" will help. The various plans for encouraging investment, such as incentive taxation, liberal loss offsets, accelerated depreciation, scientific and industrial research, *etc.*, are undoubtedly familiar to the reader. There is also a somewhat different approach, proposed from time to time, which I hesitate to mention

[16] There is of course a third solution—to raise the maximum rate of growth to the αs level by speeding up the rate of technological progress. To the extent that this is possible it appears to me as the best solution of all, except that it would contradict the case discussed in the text.

[17] This is of course a value judgment.

because it can be so easily misunderstood. This approach deals with a guaranteed growth of income.[18]

Theoretically speaking, the issue is this: we have found that if firms were "somehow" induced to invest a sufficient amount, so that national income rose at the required rate, no disappointments would follow. Suppose now that it was possible to guarantee, presumably by the government, that income would actually grow at this rate for some time to come. Would not this guarantee, if taken seriously by the business public, call forth sufficient investment and thus *make* income grow at the required rate? This is full employment by magic! Yet as one reads Leo Barnes' most interesting note describing how the C.E.D., by making a few (undoubtedly unintentional) errors, managed to "persuade industry into a prosperity," one gets a feeling that magic sometimes works.[19] We do not know, however, how seriously these C.E.D. forecasts were actually taken; still the idea is highly suggestive.

On a more serious and practical level, this much can be said for the argument. Past depressions do exert a profound influence on business thinking, and an assurance that they will not recur would undoubtedly brighten up the future and make many marginal projects worth undertaking. If, in addition, businessmen could confidently expect a growing economy, this effect would be so much stronger. The recent publication by the American Iron and Steel Institute, *Background Memoranda—Steel Capacity,* is an excellent demonstration of this point. The purpose of this memorandum is to show that the country possesses sufficient steel capacity, both relative to the peak (peacetime) year of 1929, and to the peak demands of the most important users of steel taken individually. And the only growth admitted into these prognostications was the growth of population. If a sufficient number of our industries make their plans along these lines, we will end up with some fifteen or more million unemployed.[20] But so long as the probability of future depressions is great, can we expect different plans to be made? And the sad joke about all this is that after the depression does come, these planners will justly congratulate themselves on their remarkable foresight!

It is realized, of course, that optimistic expectations cannot be created by a mere act of Congress. For several years at least the government would have to stabilize the economy on its own. We are

[18] See, for instance, John H. G. Pierson, *Full Employment and Free Enterprise* (Washington, 1947). It appears to me, however, that he lays undue stress on the level of consumption rather than on its rate of growth. See also the debate between A. R. Sweezy and E. Benoit-Smullyan, *Am. Econ. Rev.,* Vol. 34 (Dec., 1944), pp. 871-79.

[19] Leo Barnes, "How Sound Were Private Postwar Forecasts?" *Jour. Pol. Econ.,* Vol. 56 (Apr., 1948), pp. 161-65.

[20] This is not necessarily an argument for increasing steel capacity at present.

painfully aware of the magnitude of this task. But only after this has been achieved and the government has shown sufficient determination for carrying out its program, can any argument of this nature be made. Here we run into paradoxes. Thus if the government acts timidly, perhaps due to fear of a deficit, and business expectations are therefore low, little will be invested and a large deficit may in fact become necessary to prevent mass unemployment. On the other hand, a bold announcement of government objectives accompanied with a determination to carry them out, may call forth sufficient investment to make a deficit unnecessary. But these paradoxes, besides providing us with intellectual amusement, also show how difficult the stabilization problem really is.[21]

IV

The problem of capital accumulation has been fairly popular among economists, particularly among those with underconsumptionist leanings, such as Marxists and Keynesians. In recent literature, the most interesting and explicit formulation belongs to Paul M. Sweezy, to whom the main part of the present section will be devoted.[22] A good theoretical exposition belongs to R. F. Harrod, in a paper published in 1939.[23] Similar views can be found also, in one form or another, in the writings of Hansen, Kaldor, Kalecki and others.[24]

The idea that a smooth functioning of a capitalist society requires its continuous growth is of course not new. All of these writers have stated, more or less explicity, that the failure of income to grow at some required (defined in one way or another) rate will result in an excessive accumulation of capital, and—most probably—in a subsequent fall in investment. Looking over our past performances, they saw the obvious fact that income did not grow (for more than a few years, if at all) at this rate. And from this they concluded that the required rate of growth of income simply *could not* be achieved.

A clear statement of this position is given by Kaldor:

> Sooner or later, however, the point is reached where all the available labour is absorbed in production. Even if the installation of additional equipment goes

[21] There are grounds for believing that an economy whose investment is mainly of the induced type (*i.e.*, depending directly on income growth) may be particularly unstable. See T. S. Schelling, "Capital Growth and Equilibrium," *Am. Econ. Rev.*, Vol. 37 (Dec., 1947), pp. 864-76. It should be pointed out, however, that my discussion in the text does not assume in the least the absence of spontaneous investment, though the latter may be insufficient from a full employment point of view.

[22] *The Theory of Capitalist Development* (New York, 1942), pp. 180-89 and Chap. XII.

[23] R. F. Harrod, "An Essay in Dynamic Theory," *Econ. Jour.*, Vol. 49 (Apr., 1939), pp. 14-33. See also his recent book *Towards a Dynamic Economics* (London, 1948), particularly lecture three.

[24] See note 1.

on still further, current production cannot be increased much further. . . . It is this factor (labor shortage) that is ultimately responsible for that "temporary exhaustion of investment opportunities" with which several economists explain the breakdown of the boom.[25]

Similar quotations can be found in Kalecki, Harrod and Hansen. The latter states:

. . . Put in another way, the amount of investment needed to maintain full employment has historically far exceeded the amount needed for growth and progress. Yet only in full-employment boom years has the amount of investment been adequate to provide full employment. But this amount of investment could not be maintained continuously without exceeding by far the requirements of growth and progress. This is the essential cause of depressions and unemployment.[26]

An excessive accumulation of capital, however, takes place when income does not grow at the required rate for any reason whatsoever. Therefore the mere presence of unused capital is not a proof of the *inability* of income so to grow. As we saw in Section II, the settlement of the issue depends on an empirical verification, and the latter is neither given nor referred to by the authors mentioned.[27] This may of course be the case of keen intuitions swiftly running ahead of the slowly moving empirical wagon, and indeed they may be proved to be right in perceiving the fundamental cause of instability in a capitalist society. Yet in the absence of the requisite information, one hypothesis may be as attractive as another, and the reader will be perfectly justified in withholding his judgment.

The remaining part of this paper is concerned with Paul Sweezy's theory of underconsumption. It is based on two premises:

1. As national income grows, an increasing proportion of it is saved. To maintain full employment, increasing fractions of national income must therefore be invested.

2. In a well-developed capitalist economy, there exists a fairly constant relationship between the stock of capital and the output of consumption goods.

The first premise—the increasing proportion of income invested—is derived by Sweezy from what he calls "a fundamental feature of

[25] Kaldor, *op. cit.*, pp. 651-54. Thereupon he proceeds to give his practical recommendations—that investment should be prevented from "reaching beyond a certain moderate level," which is perfectly consistent with his theory.

[26] *Economic Policy and Full Employment* (New York, 1947), pp. 177-78.

[27] Mr. Kalecki has indeed tried to give an empirical demonstration in his essay in *Oxford Economic Papers*, mentioned in note 1. With all the high respect that I entertain for him, I cannot agree that this demonstration proved his point.

capitalism," (p. 187) and is based on the increasing ratios between surplus value and income, accumulation and surplus value, and investment and accumulation. I am not aware that capitalism does possess such a feature, at least in the secular sense, but let us take this premise as an assumption. Besides, Sweezy treats it as a tendency which may be, or may have been, counteracted by other forces (Chap. XII).

The second premise is based on a study by Carl Snyder,[28] and is subject, I believe, to the following correction: as was argued in Section I, a case can perhaps be made for the usefulness and possible stability of the ratio between the stock of capital and the volume of its (annual) output, but what is the meaning of the ratio between the stock of capital and that part of its output which is sold to consumers? Surely the whole plant and equipment of General Motors is not used for the production of passenger automobiles (more correctly—only those to be used for non-business purposes), while trucks and Diesel engines are produced in mid-air. It hardly makes any difference to the management from the point of view of utilization of capital, its profitability, investment prospects, *etc.*, whether the capital is used to produce consumption goods, materials to be used for further production, or investment goods. Indeed, not an insignificant part of investment is made in order to produce further investment goods, and there is nothing unusual in this process.[29] I hope I do not violate the spirit of Sweezy's theory by substituting "income" for consumption. As a matter of fact, Snyder's study to which Sweezy refers is expressed in terms of a ratio between capital and income.

To come back to the two premises. On the basis of the first premise, Sweezy tries to show that capital will grow faster (in relative terms) than income (he uses consumption), so that the ratio of capital to income will rise. This development will contradict the second premise. As a result, there will be a crisis, or—if the result had been foreseen—a long period of chronic unemployment.

To substantiate this conclusion, Sweezy presents two separate proofs —one in the text (pp. 180-86) and the other in an appendix to Chapter X (pp. 186-89). With the latter I have several quarrels, but since it is mathematical, let us delegate its examination into a similar appendix to this paper.

[28] Carl Snyder, "Capital Supply and National Well-Being," *Am. Econ. Rev.*, Vol. 26 (June, 1936), pp. 195-224.

[29] This point was also made by Fellner, *op. cit.*, Chap. II. This error of thinking in terms of a ratio between capital and consumption rather than that between capital and total output or income is very frequent in economic literature. It probably goes back to the idea that consumption is the final aim of production and that therefore all capital is used for the production of consumer goods. This is true in a stationary society.

Let us turn to the proof given by Sweezy in his text. It does follow from the first premise that ***investment*** will grow at a faster relative rate than income. But from this we cannot yet conclude that *capital* will grow faster than income. In Sweezy's treatment, capital is the integral (sum) of investment. But the fact that one function (investment) grows relatively faster than another (income) does not necessarily mean that the integral of the first function (*i.e.*, capital) must grow faster than the second function itself. The exact relationship between this integral and income will depend on the actual behavior of investment and income, or more precisely on their respective rates of growth. The rate of growth is the missing link in Sweezy's argument.[30]

It can be shown that if income grows at the rate of r per cent per unit of time (year), and if α per cent of it is annually invested, the ratio of capital to income will approach as a limit the expression α/r where α and r need not necessarily be constant.[31] Now Sweezy's contention that an increasing α will result in an increasing ratio of capital to income emerges as a special case where r is constant. By itself an increasing α is neither a necessary nor a sufficient condition for determining the ratio of capital to income.

That this is so can be seen more or less intuitively, without going through mathematical derivations. Suppose Sweezy were right, and an increasing α by itself led towards excess accumulation of capital. Wouldn't we expect then that a constant α would automatically give the correct ratio of capital to income, while a falling α would result in a chronic shortage of capital? The last case is not at all improbable, yet we would intuitively refuse to believe that if some country's propensity to save (all this net, over and above depreciation) was reduced, say, from 15 to 10 per cent, that country would necessarily suffer from a shortage of capital.

By committing this logical error and by insisting that a rising α is a "fundamental feature of capitalism," Sweezy unnecessarily weakens his own position. Even if α is constant, the problem of excess accumulation of capital is by no means solved. We saw in Section I that such a solution would require income to grow at the rate of αs per cent per year, and this is by no means an easy requirement. For that matter, even a falling α will not necessarily eliminate excessive accumulation of capital.

In Sweezy's appendix the conclusion is more restricted. Here it

[30] It is, however, explicitly taken into account in his appendix.

[31] See my paper "Capital Expansion, Rate of Growth, and Employment," *Econometrica*, Vol. 14 (Apr., 1946), pp. 137-47.

appears that excess accumulation of capital will develop only if income does *not* grow at an accelerated absolute rate. (If it does, the answer is inconclusive.) But this is a very modest requirement indeed. Surely we can make our national income increase the first year by $1 billion, the second, by $1.1 billion, then $1.2 billion, and so on for the next thirty or even fifty years. From the point of view of practical achievement, it is not so much the mathematical character of the rate of growth that matters, but its actual magnitude, a question to which Sweezy pays no attention at all.

Be that as it may, Sweezy believes that his requirement—that income grow at an accelerated absolute rate—cannot be achieved in an "old" capitalist society such as the United States. And the clarity of his exposition (p. 189 and Chapter XII) leaves no doubt to which of the two of our hypotheses he subscribes: it is the physical limitation, and more precisely—the insufficient rate of population growth—that prevents the economy from growing at the required rate. For this reason he concluded (p. 189) that "So far as capitalism is concerned we are undoubtedly justified in calling underconsumption a disease of old age."

* * *

Yet, as one meditates about the problem of capital accumulation, one still has the feeling that between the views of those economists who do not bother with the problem at all and who see a wide road to continued prosperity once a few adjustments (particularly in regard to labor unions) are made, and the opinions of those who assure us that in a capitalist society this road is closed altogether, there may exist a path which winds its way around both extremes. But it is a narrow path.

Appendix to Section IV

We examine here the appendix to Sweezy's Chapter X, which, according to him, is based on Otto Bauer's book *Zwischen zwei Weltkriegen?*, published in 1936. Perhaps a direct quotation would be the best way to start (pp. 186-87).

If I is the net national income in value terms, w the total wage bill (= worker's consumption), l the part of surplus value consumed by capitalists, and k the part of surplus value added to constant capital (= investment), then we have the following equation:

$$I = w + l + k \tag{1}$$

All of these concepts, of course, represent rates of flow per unit of time . . . if K is the total stock of means of production, then $k = dK/dt$. We assume that

the national income steadily rises and that each of its three component parts also rises. Thus if we regard w and l as functions of k, it will always be true that as k increases, w and l will also increase. But since it is a fundamental feature of capitalism that an increasing proportion of surplus value tends to be accumulated, and an increasing proportion of accumulation tends to be invested, both w and l must grow less rapidly than k. Hence we have:

$$w = f(k) \text{ such that } 0 < f'(k) < 1 \text{ and } f''(k) < 0 \tag{2}$$

and similarly:

$$l = \varphi(k) \text{ such that } 0 < \varphi'(k) < 1 \text{ and } \varphi''(k) < 0. \tag{3}$$

But expressions (2) and (3) do not necessarily follow from the "fundamental feature of capitalism" as described in the preceding paragraph. If surplus value is a non-diminishing part of national income (as shown in Sweezy's discussion), and an increasing fraction of surplus value is accumulated, and finally if an increasing proportion of accumulation is invested, then what does follow is that the ratio of investment to accumulation, to surplus value, to consumption and to national income rises. In other words, what is given by the "fundamental feature of capitalism" is that

$$\frac{d\left(\frac{k}{I}\right)}{dt} > 0 \tag{4}$$

or that

$$\frac{d\left(\frac{k}{m}\right)}{dt} > 0, \tag{5}$$

where $m = w + l =$ total consumption.[32] But it does not at all follow that $f'(k) < 1$ (or that $\phi'(k) < 1$). As a matter of fact, from what we know about the magnitude of k and w, there is a very good presumption in favor of $f'(k) > 1$. There is a confusion here between absolute and relative rates of growth. Fortunately, the assumption that $f'(k) < 1$ is not needed for his proof. But the other one—$f''(k) < 0$ is needed; yet it cannot be said that it necessarily follows from (4) in the general case. Some additional assumptions would be necessary.

Let us try to re-work the problem. Our first assumption will be that

[32] We can also say that $\frac{dk}{dt}\frac{1}{k} > \frac{dI}{dt}\frac{1}{I}$, *i.e.*, that k will grow at a greater *relative* rate than I. Mathematically, it amounts to the same thing. The same holds true for m.

the ratio of investment to income remains constant or increases, *i.e.*, that

$$\frac{d\left(\frac{k}{I}\right)}{dt} \geqq 0. \tag{6}$$

The second one is our familiar *s*, which, or rather the inverse of which, Sweezy also uses as the required ratio between capital and income. (Though he uses it as the ratio between capital and consumption.) If

$$I = Ks, \tag{7}$$

$$\frac{dI}{dt} = \frac{dK}{dt} \cdot s = ks. \tag{8}$$

The expression (7) is the equilibrium condition from the point of view of this problem. Differentiating (6) we get

$$I\frac{dk}{dt} \geqq k\frac{dI}{dt}. \tag{9}$$

From (8) we obtain

$$\frac{d^2I}{dt^2} = \frac{dk}{dt} \cdot s \tag{10}$$

and the substitution of (8) and (10) into (9) gives us

$$I\frac{d^2I}{dt^2} \geqq \left(\frac{dI}{dt}\right)^2. \tag{11}$$

We shall now prove that the expression (11) is equivalent to the statement that the *relative* rate of growth will be constant or will increase. For

$$\frac{d\left(\frac{\frac{dI}{dt}}{I}\right)}{dt} \geqq 0 \tag{12}$$

immediately gives

$$\frac{I\frac{d^2I}{dt^2} - \left(\frac{dI}{dt}\right)^2}{I^2} \geqq 0,$$

which is identical to (11).

We can conclude that:

1. If the ratio of investment to income is constant, the preservation of equilibrium requires that income grow at a *constant relative* rate.

2. If that ratio is, as Sweezy assumes, increasing, national income should grow at an *increasing relative* rate.

Comparing our results with Sweezy's, we find that:

1. *His* assumption that an increasing fraction of national income is invested is not necessary for *his* conclusion that income must grow at an increasing *absolute* rate. A constant, and under some conditions even a falling, fraction of income invested will give the same result.

2. Even a constant fraction of income invested yields a stronger result here than an increasing fraction does in his appendix.

PLANNED ECONOMY IN NORWAY

By LAWRENCE R. KLEIN*

Postwar reconstruction in Europe has been confronted with many problems, necessitating the adoption of a variety of techniques in order to overcome the obstacles. These techniques range all the way from those associated with free markets to those associated with complete planning. The Norwegian reconstruction program has been based on planning techniques which can be classified among the most positive programs in Western Europe. National economic planning in Norway should be of particular interest to professional economists because of its modern character which is a result of the influence of Norwegian economists in the drafting of the program. In this paper, the new experiments in economic planning now taking place in postwar Norway will be closely examined. The basic material is not yet generally available in the English language, but it should not be neglected.

Some Background Information

Without going very deeply into the matter, we shall try to point out a few salient features of the structure of the Norwegian economy that are indispensable to a clear understanding of the present plans.

As one of the smaller capitalist democracies of Europe (population 3,123,338), Norway enjoyed a relatively high standard of living before the war. The excess (as compared with domestic requirements) output of fish products, forest products, mineral products, shipping services, and other types of production was used to supplement domestic output by trading for agricultural products, textile manufactures, machinery, steel, other durable manufactures, oil, coal, and other metals. The supply of cheap water power within the country has been a major factor enabling Norway to develop industrially.

A good idea of the relative importance of different industrial sectors in the prewar economy can be obtained from Table II on the national product originating in each sector of the economy. In Table I, it

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can be seen how foreign trade was used to meet the demand over and above home production.

On the whole, industrial development of prewar Norway was based on private enterprise. Only the railroads, power stations, and other public services were state owned. This characteristic carries over into the planned economy of today, for only one-fourth of the gross

TABLE I.—NET NATIONAL PRODUCT OF NORWAY
(millions of current kroner)

	1935	1939	1946 Preliminary	1947 Budgeted	1947 Preliminary	1948 Budgeted
Net national product	3,376	4,952	7,937	8,600	8,739	8,608
Imports of goods and services	1,064	1,704	3,063	3,840	4,727	4,260
Total supply of goods and services	4,440	6,656	11,000	12,440	13,466	12,868
Exports of goods and services	1,154	1,745	2,316	2,940	3,350	3,650
Public net investment	372	50	225	450	571	428
Public consumption		456	1,438	1,000	1,129	1,002
Private net investment	214	555	1,000	1,550	1,586	1,084
Private consumption	2,700	3,850	6,021	6,500	6,830	6,704
Total disposition of goods and services	4,440	6,656	11,000	12,440	13,466	12,868
Export surplus for goods and services	90	41	−747	−900	−1,377	−610
Net interest and dividend income from abroad	−70	−57	−25	−55	−35	−45
Surplus on balance of payments	20	−16	−772	−955	−1,412	−655

Sources: St. meld. nr. 10 (1947), *Om nasjonalbudsjettet 1947*, Oslo, p. 86. Tariff receipts have been added to the national product figures given here. St. meld nr. 1 (1948), *Nasjonalbudsjettet 1948*, Oslo, pp. 5, 7, 35–46, 81, 82.

investment planned in the 1948 National Budget is to be undertaken by the state. But in the immediate postwar period the economy was changed from one of relatively free private enterprise to one of controlled and planned private enterprise. It is this controlled and planned economy that will form the basis of our present investigation. It must be stressed, however, that controls and regulations were not entirely new phenomena confronting the Norwegian people after the liberation, for there was an acquaintance with such methods in the prewar era. The people were psychologically prepared for the new development as a result of their familiarity with the milk marketing control system, the state grain monopoly, other laws or regulations

applying to the marketing of agricultural and fishing products, and the well-established system of social services.

The conditions under which economic planning was introduced to Norway are not fully reflected in the peacetime structural characteristics as discussed above. During the occupation, the nazis slaughtered the live stock, prohibited the maintenance of the peacetime capital

TABLE II.—NET NATIONAL PRODUCT—DISTRIBUTED BY INDUSTRY OF ORIGIN
(millions of current kroner)

	1935	1939	1946 Preliminary	1947 Budgeted	1947 Preliminary	1948 Budgeted
Agriculture	288	364	614	633	530	571
Forestry	97	101	305	374	362	422
Fishing	54	60	146	150	226	198
Whaling	41	36	92	178	209	161
Industry: Building and construction	165	296	623	716	801	739
Manufacturing, mining and handicraft	973	1464	2075	2290	2508	2658
Transportation: Shipping	157	449	440	531	554	606
Inland	130	177	323	351	350	355
Trade	385	571	1050	1150	1243	1051
Finance	97	117	125	125	125	125
Hotels, boarding houses and restaurants	54	77	105	110	120	120
Paid and imputed net rents	199	268	264	264	264	269
Unpaid housework	512	655	1155	1165	1165	1165
Public administration	70	107	230	210	230	230
Sundry services	224	288	420	475	475	475
Total	3446	5030	7967	8722	9162	9145
Expenses not allocated	70	78	30	122	423	537
Net national product	3376	4952	7937	8600	8739	8608

Source: Same as Table I.

equipment, sunk ships on the high seas, disorganized transportation facilities, used up stocks of finished commodities, and generally depleted Norway's stock of capital. Moreover, certain areas were destroyed by sabotage and military bombing. It has been estimated that the total national wealth embodied in productive capital and household property was reduced by 18.5 per cent from 1939 to 1945.[1] The capital destruction was particularly high in some of those industries most strategic to the well functioning of the economy, such

[1] Saerskilt vedlegg nr. 11 til statsbudsjettet (1945-46), *Nasjonalregnskapet og nasjonalbudsjettet,* Oslo, p. 26.

as the fishing and shipping fleets. A further insight into the war costs is obtained from the data on the flow of goods going to the occupation authorities. Much more than one-third of the total real supply of goods was earmarked as occupation costs, and private consumption and investment fell to one-half the 1939 level by 1944.[2]

The liberated state of the Norwegian economy was an economy of shortages. There were shortages of the supplies of many types of important goods, shortages of productive equipment, shortages of labor, and shortages of foreign exchange. In this situation a very wise use of scarce resources was called for, much wiser than the uses that would be dictated by the free-market mechanism. It was immediately realized that rational progress could be made only through a system of direct controls. During the occupation, a system of wartime controls had been instituted; thus the problem was to retain the desirable aspects of these controls, do away with the undesirable aspects, and develop new controls that would facilitate the rebuilding of the economy. The shortages of consumer goods called for rationing and price controls; the shortages of industrial goods for rationing, priorities and licensing; the shortages of labor for wage-price formulas; the shortages of foreign exchange for import-export licensing and exchange controls. The labor party government, voted into power with an absolute majority in 1945 and receiving other working-class votes on domestic policy, set out upon the rebuilding of the country on the basis of a national budget designed to coordinate all the different policies into a comprehensive plan.

National Budgeting

The National Budget for 1947, which may be looked upon as a one-year plan for the Norwegian economy, was composed of the following sub-budgets: (1) The manpower budget; (2) the materials budget; (3) the budget for the exchange of goods and services with foreign countries; (4) the foreign exchange budget; (5) the production budget; (6) the consumption budget; (7) the investment budget; (8) the budget for the public sector; (9) the general budget. This formidable list of subheadings gives the reader a good idea of the comprehensive character of the national budget, and the titles by themselves indicate the general content of each section of the complete program. At a later stage we shall go more deeply into the specific content of each sub-budget.

All the cabinet ministries and some other government agencies have participated as specialists on the part of the National Budget

[2] *Ibid.*, p. 24.

touching upon their own affairs. The work of all the specialists has been properly coordinated into a consistent pattern by the Committee of the National Budget, made up of technical experts from the several government departments. The governing political agency in this work is the cabinet committee on economic matters,[3] one of whose members, the Minister of Trade, has a secretariat office that drafts the final document. The bureau chief of the Office of the National Budget is chairman of the Committee of the National Budget.

The Norwegian National Budgets are definitely intended to be programs for the one-year development of economic affairs. It is being debated within the country whether or not the budget is actually a program, but the statements of policy in the 1947 budget leave no doubt that the intention is for the budget to be a program. By a program budget the Norwegians mean a budget that is not purely one of diagnosis or prognosis, but one that determines quantities and prices at levels that are considered in advance to be in the social interest. A diagnosis merely analyses the economic situation and characterizes it as of a certain type, say inflation, deflation, full employment, underemployment, *etc.* A diagnosis proposes no specific cures for unhealthy economic situations. A prognosis attempts to forecast the course of developments in the economic system, especially in the free sectors of the economy. A prognosis makes no statements as to where prices and quantities should be, only as to where they will probably be. The reports of the President's Council of Economic Advisers and the reports of the President to the Congress in the United States are largely diagnoses and prognoses; they are not programs. It is only through the system of direct and indirect controls in the Norwegian economy that the national budgets can be made into true programs.

The first part of the program is to set up the goals for the different branches of economic activity on the basis of the population's preferences for different types of goods. One might say that the public authorities try to construct alternative social valuations by considering whether to import consumer goods now or to restrict consumption and first build up the productive capital; whether to construct dwellings to meet the housing shortage or to extend the facilities for public services; whether to invest in ships or in new industries that produce goods at home; and so forth.

After the social goals have been set up, the next step is to analyze the control mechanism that will be necessary to realize the goals.

[3] The members are now the Prime Minister, the Minister of Finance, the Minister of Trade, the Minister of Social Affairs, the Minister of Supply, the Minister of Industry and Shipping.

The plan is finally realized in each of the sub-budgets, where available resources are fully utilized by means of the controls in order to achieve the stated goals. In passing, it might be remarked that the logic of this scheme could easily be fitted in with the modern theory of welfare economics which envisages a maximum of social welfare (defined by a social valuation function) subject to the constraints of the society such as the technology, the free supply of labor services, and possibly others.

The goals are put forward as an investment policy, an employment policy, an export-import policy, and a policy for each producing sector of the economy. In some cases the last named policies overlap the others. Merely as an example of the form in which the goals are stated, we present a summary of the investment policy for 1947.

Stocks of building materials were seriously reduced during the war and were too low at the beginning of 1947. The goal was to rebuild stocks and to increase building activity as compared with 1946 but with unchanged employment. Community and state building projects were to be limited and reduced as compared with the preceding year, with the exception of power projects. A program of 18,000 new dwelling units was set up for 1947, and a part of this program was to limit repair and maintenance of existing dwellings so as to channelize all efforts into the building of new units. Construction for finance, trade, hotels, restaurants, churches, schools, hospitals, and all inessential activity was to be limited as far as possible. It was thought that Norway had gone far enough in the past in the construction of facilities for social services such as churches, hospitals, and schools and that such projects ought not to be resumed in their old proportions again before the postwar reconstruction period was completed. Construction activity and investment in new capital was to be regulated so as to expand the production of exports (especially to hard currency areas) and producer goods. Many specific principles were put forth to restrict investment in inefficient or inessential industries.

In a similar way, policies were designed for employment and foreign trade. These three policies together implied a policy for consumption. In each of eight productive sectors of the economy, the peacetime and immediate postwar problems of the industry were analyzed, leading to the conclusion that the industry should be rationalized through the introduction of larger producing units, labor-saving machinery, and more capital per worker. Policies were advocated for a better coordination of the seasonal and geographical location patterns of several interrelated industries. In connection with the ocean shipping industry, the longer range policies having to do with the rebuilding of the fleet

were presented. It also stated which industries were to be given a lower priority rating in the early years of the postwar construction program.

The system of direct and indirect controls should be looked upon as the means of achieving the stated aims of planning. The most important set of means is obviously the direct controls in the real sector of the economy—controls on the quantities produced and distributed either at home or abroad. Among the quantity-regulating controls, import and export licensing are the most important because Norwegian imports are an essential factor of production; hence import regulation gives the authorities control over production plans. Short of nationalization, this is one of the few ways that true planning can be achieved in Norway. Imports are further controlled through the rationing of foreign exchange. The export licensing system has strategic importance because the proceeds of exports are major sources of the vitally needed imports. These controls are carried out by the Bank of Norway, the Directorate for Export and Import Regulations in the Ministry of Trade, and other agencies concerned with particular products.

The quantity-regulating controls carry over into the domestic economy through the rationing system imposed upon consumers and industrial users of scarce goods. Much food, clothing, and housing space are rationed to consumers, while strategic materials such as lumber, iron, steel, cement and bricks are rationed to producers. These controls serve to implement the consumption, investment and production budgets.

Other direct controls of lesser importance are those on the permission to start new firms and that on the use of manpower. Since the strength of the planning government lies in its trade-union support, it is unlikely that direct controls will be tolerated in the labor market as long as workers retain their present suspicious attitude. Such mild measures as propaganda and employment offices to guide unemployed workers to job opportunities are the most powerful means applicable at this stage of development. The only exception has been the manpower controls in the construction industry where permits are required for projects using more than a certain small number of workers.

In addition to the direct controls, the authorities have used various indirect measures with much success. Manipulation of relative or absolute prices, wages, interest rates and taxes have often brought about the desired results. These controls are used to limit or encourage the starting of new firms, fight inflation, regulate investment or consumption, etc. Wage policy has been used as a substitute for direct controls in the labor market. The whole government fiscal policy, including subsidies and expenditure as well as taxes, has been designed so as to achieve the planned goals.

The National Budget for 1947

A condensed version giving a summary of each of the main sub-budgets in the National Budget is very useful at this stage in giving the reader an impression of the magnitude of the task undertaken. Because of its summary character, this condensed version cannot do justice to an exposition of the total complexity of the work involved in drawing up the National Budget.

1. *The manpower budget* gives an analysis of the supply and demand

TABLE III.—NUMBER OF PERSONS EMPLOYED

	Summer 1946	Budgeted Summer 1947
Building and construction	110,000	104,000
Of which:		
State	35,000	31,000
Community	20,000	18,000
Private industry } Other private }	55,000	11,000
		44,000
Agriculture	450,000	435,000
Other industries	778,000	817,000
Total	1,338,000	1,356,000
Available manpower	1,338,000	1,356,000

Source: St. meld. nr. 10 (1947), *Om nasjonalbudsjettet 1947*, Bilag 1, p. 52.

for labor in each of the several sectors of the economy. Table III shows an over-all picture of the budgeted state of employment for the summer of 1947 as compared with the summer of 1946.

It is interesting to point out that a preliminary budget showed a greater use of manpower than was available in the labor force. As a result of this contradiction, a new budget was drawn up in which the use of manpower was scaled down and redistributed. In addition to the budget of the state of employment as of certain dates in the year, there was presented a budget of the shifts in manpower during six-month periods among industries, to and from Norway, in and out of the labor force, and in and out of the ranks of the unemployed. The main detail of the manpower budget lay in the figures for employment in particular industries according to a very refined breakdown.

2. *The materials budget* considers the supply and utilization of strategic materials, mainly those for construction such as lumber, bricks, and cement. These were considered as the main limitational materials for 1947, although this assumption later proved to be incorrect. The statistical data of this budget (not presented here) gives

figures, in physical units, of the supply of building materials and the associated area of floor space that can be provided from these materials. These data are then transformed into aggregate construction costs.

3. *The foreign trade budget* shows the annual operations that have to do with the importing or exporting of goods and services. A summary of the 1947 plans for ships, other goods, and services is shown in Table IV.

TABLE IV.—IMPORT AND EXPORT OF GOODS AND SERVICES
(millions of current kroner)

	1946	Budgeted 1947
Imports:		
Goods (excluding ships)	1942	2450
Defense imports	160	170
Ships (net)	416	565
Whaling expenditures overseas	10	10
Shipping expenditures overseas	400	450
Expenditures for other services	100	120
	3028	3765
Exports:		
Goods	1164	1500
Direct sale of whale oil	35	65
Shipping income from overseas	1000	1200
Other services	80	100
Import surplus	749	900
	3028	3765

Source: Same as Table III, p. 65.

Since the import of ships is reckoned net instead of gross, the figures for imports and exports differ slightly from those of Table I; however, the import surplus is not affected.

4. *The foreign exchange budget* serves to close the accounts between Norway and the outside world showing how the import surplus and overseas interest payments must be covered by capital items representing debits and credits with foreigners. On balance, the figures showed the familiar Western European phenomenon of the use of foreign loans and credits and accumulated exchange balances to meet the deficit in the balance of payments. An attempt was made to allocate the use of exchange balances among various hard and soft currencies.

5. In each of the several industries comprising the total economy, the national product is determined according to the amount originating in each industry. This is *the production budget*. For each sector, calculations are made for the gross value of production, expenditures on materials from other industries, depreciation of capital, and government

subsidies. These calculations are made in both current and 1939 kroner. The planned figures, in current prices, can be read from Table II. These production figures must be in correspondence with the amount of labor allocated to each industry in the manpower budget and also with parts of other sub-budgets.

6. *The consumption budget* considers the amounts of each of several types of consumer goods that will flow to households in accordance with the output schedules of the production budget, the import budget, and the behavior patterns of households in disposing of their means of payment. The designers of this budget must also consider such things as

TABLE V.—THE CONSUMPTION BUDGET
(millions of current kroner)

	1946	Budgeted 1947
Expenditure on consumer goods[a]	4015	4258
Housework	1155	1165
Housing services (gross)	450	450
Miscellaneous	600	625
Total private consumption	6220	6498
Public consumption	1100	1000
Total	7320	7498

[a] Includes only the goods listed in the preceding text.
Source: Same as Table III, pp. 92 and 95.

minimum consumption standards, rationing, price controls, and other factors that limit behavior patterns.

There are very detailed figures on the consumption of specific commodities such as food, tobacco, liquor, clothing, shoes, fuel, furniture, radios, house furnishings, and bicycles. The goal was to let consumption of these goods approach prewar levels as nearly as possible without interfering with other aspects of the plan. The consumption budget is given in Table V.

It was reckoned in the National Budget for 1947 that planned expenditures on consumer goods of 4,258 million kroner would bring national consumption to 97.2 per cent of the prewar normal figure. However, the distribution of consumption among different commodities has been radically changed since the war, and this comparison must not be interpreted too literally.

7. *The investment budget* essentially completes the picture by showing that part of the available stream of goods and services that does not flow to households or foreigners. For each industry, detailed calculations are made of investment plans covering gross investment, mainte-

nance, repair, depreciation, inventory changes, and net investment. In Table VI investment is divided into private, state and communal, to give a rough idea of the structure of ownership of the means of production in the Norwegian economy.

8. The remaining two sub-budgets are implied largely by the data in the other budgets and need not be considered in any detail here. The expenditure items in the budget for the public sector are given in Tables V and VI in the figures for public consumption and public investment. Subsidies are treated in the production budgets, and government employment is covered in the manpower budget. The revenue

Table VI.—The Investment Budget—Budgeted, 1947
(millions of current kroner)

	Gross Investment	State	Community	Private
Agriculture	135.8	0.8	0.8	134.2
Forestry	18.2	2.0	0.4	15.8
Fishing	39.4	7.3	—	32.1
Whaling and other catching operations	97.0	—	—	97.0
Industry:				
Manufacturing, mining, and handicraft	458.3	23.7	2.4	432.2
Electric power plants	160.0	30.0	113.0	17.0
Transportation and communication:				
Shipping	665.0	—	—	665.0
Inland	609.4	310.5	75.8	223.1
Trade	111.0	—	—	111.0
Finance	1.0	—	—	1.0
Hotels, boarding houses and restaurants	17.0	1.0	—	16.0
Housing	595.0	5.0	11.0	579.0
Public administration and defense	198.0	195.0	3.0	—
Miscellaneous	73.0	28.7	34.9	9.4
Total	3178.1	604.0	241.3	2332.8

Source: Same as Table III, pp. 98–99.

side of the public accounts is not explicitly treated in the National Budget for 1947 although it is adequately taken into account. This matter is better handled in the National Budget for 1948. Obviously the general budget, the other remaining sub-budget, is only a combination of figures from the other separate budgets.

Fulfillment of Goals

Many preliminary estimates have already been published for data pertaining to 1947; hence it is possible to compare the first laid plans with reality. During the course of the year, as new developments occurred, plans were revised accordingly. Flexibility is an essential fea-

ture of a smooth-working planned economy. But it is nevertheless fruitful to compare the original plans with results to see how effectively one can look ahead for one year within the framework of a controlled economy of the Norwegian type.

The most favorable comparison of the plans with results should be in the most aggregative national accounts where the possibilities of compensating errors can be more fully realized. It is commonly known that economic policy makers often commit their biggest errors (at least percentagewise) in the more specific rather than the more general spheres of activity.

From the data for budgeted 1947 and preliminary 1947 in Table I, it is readily seen that the only real errors occurred in imports and to a lesser extent in exports. Those activities having to do only with home production were much better controlled and hence agreed much better with the plans. While it must frankly be admitted that a mistake was made and that the import surplus was larger than desired, it should be stressed that this error in no way caused an economic crisis. People ended up the year's activity with a larger supply of goods available than had been reckoned, and this, in itself, is not necessarily a bad thing. The undesirable features are that some of the imports can be considered as irrational in that they do not fit in perfectly with the plan for the economy and that a liquidity crisis was caused in the foreign exchange reserve accounts. The excessive imports of 1947 lead to attempts to cut down imports for 1948.

The value of Norwegian exports is largely determined by factors outside the control of Norwegian planners. This refers both to prices and quantities of exports. Clearly, the extraordinarily great demand for Norway's exports was underestimated by the planners, but there is little that could have been done about this in advance. This type of forecasting error is not completely harmless, but in the present circumstances did little damage.

It is difficult to say whether or not the excessive imports represent an unavoidable error of planning. That part of the excessive imports that was due to inflationary price movements in the United States was obviously not controllable by the central planners in Norway. This shows up the difficulties of planning in an unplanned world. To a great extent this is an error of forecasting and is not any argument against the principles of planning since forecasts must always be made in any type of economy. Another important factor leading to excessive Norwegian imports was the time discrepancy between foreign orders and deliveries. Delivery dates were very uncertain, and the Norwegians found themselves suddenly confronted with several unexpected deliveries, all requiring immediate payment. The import licenses for

these goods had already been issued so that nothing was done to stop their inflow. Thus, another part of the error was caused by bad forecasts of the delivery date of imports. However, the central government does have a strong control over imports and exchange reserves through its licensing system. Some economists in the government claim that the issuance of import licenses was administered in a faulty manner and that proper administration would have prevented the imports from becoming as large as they did when deliveries suddenly began to appear. The faulty administration is an error of planning, but it is one that can be avoided in the future.

TABLE VII.—NUMBER OF PERSONS EMPLOYED

	Budgeted Summer 1947	Summer 1947
Building and construction	112,000	117,000
Of which:		
State	31,000	30,000
Community	23,000	24,000
Private	58,000	63,000
Agriculture	449,000	446,000
Other industries	817,250	811,000
Total	1,378,250	1,374,000

Sources: St. meld. nr. 10 (1947), *Om nasjonalbudsjettet 1947*, Oslo, Bilag 1, p. 52. Some of the figures have been changed to make them comparable with the *definitions* used now. The original planned figures are given in Table III above. St. meld. nr. 1 (1948), *Nasjonalbudsjettet 1948*, Oslo, pp. 47–48.

Production and employment are two variables more subject to control and influenced largely by the course of events in the domestic economy. Here the record of the planners is not so bad.

The tables on employment and production (in constant kroner) refer to the real sphere of the economy, and are not obscured by price movements that occur even with the strong price controls (ceilings). The exact correspondence between some of the items in each of the two columns of Table VIII is, of course, purely a result of the fact that they are both estimated in the same way. However, this reservation does not negate the fulfilment of the plan.

A further comparison of production plans and results in terms of unadjusted (for definition changes) figures in current kroner can be made from the data in Table II.

In the materials budget, the year's production of lumber, bricks, and cement was practically as planned. Production was 300,000 standards of lumber, 100,000,000 bricks, and 450,000 tons of cement as

compared with plans of 330,000, 100,000,000, and 450,000 respectively. The disappointments surrounding the housing program were not that the three strategic limitational factors were unavailable; it was that other factors were actually the true limitational factors. Norway received the lumber, bricks, and cement as planned, but she did not have adequate supplies of other essential materials for house building. As a result, the very ambitious housing program adopted after the end of the

TABLE VIII.—NET NATIONAL PRODUCT DISTRIBUTED BY INDUSTRY OF ORIGIN
(millions of 1939 kroner)

	1947 Budgeted	1947 Preliminary
Agriculture	298	269.0
Forestry	168	152.5
Fishing	52	60.0
Whaling	31	40.1
Industry:		
Building and construction	415	460.0
Manufacturing, mining, and handicraft	1476	1476.0
Transportation:		
Shipping	251	263.0
Inland	217	217.0
Trade	715	737.0
Finance	79	79.0
Hotels, boarding houses and restaurants	70	70.0
Paid and imputed net rents	275	275.0
Unpaid housework	682	682.0
Public administration	150	150.0
Sundry services	300	300.0
Total	5179	5230.6
Expenses not allocated	51	51.0
Net national product	5128	5179.6

Sources: St. meld. nr. 10 (1947), *Om nasjonalbudsjettet 1947*, Oslo, p. 87. Some of the figures have been changed to make them comparable with the *definitions* used now. St. meld. nr. 1 (1948), *Nasjonalbudsjettet 1948*, Oslo, p. 46.

war was scaled down to be more consistent with present facilities. The fantastically large housing program of 100,000 units for the four-year period 1946 through 1949 will probably be only half-fulfilled. In the year 1947, only about 12,000 units were completed while the budgeted goal was more.[4] At the end of the year, there were 17,000

[4] The National Budget is vague on the number of completed housing units. It calls for 18,000 units but hedges to an indefinite extent by saying that all may not be completed because some materials may not be available before the latter part of the year. See *Om nasjonalbudsjettet, 1947*, p. 111.

units under construction outside the war-devastated areas of Finnmark and Nord-Troms. The poor showing of the housing program during 1947 is, of course, attributable to faulty planning, but the four-year program adopted after the war (in the fall of 1945) was not a carefully thought-out plan developed within the framework of national budgeting.

The National Budget for 1948

The previous discussion has considered the National Budget for 1947 in some detail because that particular document went very far in explaining the means, ends, and principles of Norwegian planning and also because the actual plans can at this time be checked against the results. The planning activity continues in full force although the form of the National Budget for 1948 has changed somewhat as compared with 1947. There is not the same detailed discussion of ends, means, and the general principles of planning. The program remains much the same, however, and the work is continuing according to similar ends, essentially the same means and the same set of guiding principles.

In its form, the National Budget for 1948 is more elegant and manages to say as much as in 1947 with fewer pages; this represents administrative progress in planning. The budget is now published without the technical appendices that contain many of the detailed plans. The appendices follow in separate publications. Since the assumptions pertaining to the international level of economic activity play such an important role in determining exports, imports, and internal Norwegian variables, several pages are devoted to a discussion of this problem in the latest budget. This particular analysis represents an improvement in the budgeting techniques and should lead to the result that the foreign accounts for 1948 will agree more closely with the plan than was the case for 1947.

In the new document there are some desirable consolidations in the discussion of the sub-budgets, these consolidations obviously being made in the light of structural characteristics of the economy. A major consolidation occurs between the manpower and production budgets. One of the most important structural characteristics restricting the planners' decisions is the technological input-output possibilities. Since labor is the most important variable production factor within a one-year period, the production and manpower budget should be intimately related and even combined into something like a technological budget. The combination of these two budgets is a very desirable feature of the newer work.

The budget for the public sector contains accounts that appear in other budgets; hence this particular budget may very well be omitted, as was done in the National Budget for 1948. The public expenditures on goods and services appear in the consumption and investment budgets. Production originating in the public sector of the economy appears in the production budget, and the tax-subsidy-transfer items are covered in various parts of other accounts. Finally, the new budget contains a useful discussion of the national income (as distinct from expenditure or production) and its distribution.

The main features of the National Budget for 1948 are the following: (1) Imports and the import surplus are cut substantially. (2) The housing program is cut to a more reasonable size as compared with the productive abilities. (3) Investment is reduced largely as a result of the reduced imports. (4) Total consumption is kept on approximately the same level as in 1947 but with a changed distribution. Two of the principal errors of planning in connection with the 1947 budget were the underestimate of the import surplus and the overestimate of the housing program. In constructing the new budget, both these errors were taken into account by restricting imports more severely and by adopting a more modest housing program. The investment which results entirely from Norwegian production is to rise rather than fall in 1948, but the import restrictions are so severe that total investment will be substantially cut. The figures for consumption show an apparent fall from 1947 to 1948, but if reductions of sales taxes during the latter part of 1947 which carry over to all of 1948 are taken into account, it can be seen that aggregate consumption will remain essentially unchanged. Population growth, however, is such that *per capita* consumption in 1947 was 95 per cent of the prewar normal, while in 1948 it is planned to be only 91 per cent. Among the items of consumption, clothing, textiles, and shoes are planned to be much less abundant in 1948 than in 1947. A summary of the 1948 budget can be seen from the figures in Table I.

An Appraisal of Norwegian Economic Planning

One of the most evident and most striking features of the Norwegian economy is its stability since 1945—a stability achieved in the midst of inflations and deflations in other economies of the world that have tried the unplanned, free-market solutions.[5] The stabilization program has been achieved only through the application of strong price controls and subsidies along with a wage-price formula and all the other elements of the whole national plan. In this way, workers' real incomes have been protected—much more so than in most unplanned economies

[5] The official cost-of-living index was at 156 for 1945, 159 for 1946, 160 for 1947, and at 158, 159, and 160 for the first three months of 1948.

where wages have lagged behind inflationary price movements. The important consequence of this stabilization is that reconstruction has proceeded continuously without the occurrence of a single major strike thus far.[5a] It will be hard to find a parallel example in the unplanned economies where labor's real income was not protected. The success in avoiding a major postwar strike is not a result of apathy among Norwegian workers, for they have a prewar record of great militancy. It does point to the stability of an economy which has a labor government working in the interest of the laboring class.

Most Norwegian economists agree that wages and prices have been relatively stabilized at such levels that income is much more evenly distributed than was the case before the war. This remark applies not only to workers and capitalists but also to farmers, foresters and fishermen. Something that is left entirely unclear, however, is the future course of the income distribution. The government has not yet laid down its future policy on the wage-price ratio, but it hardly seems possible that a labor government can make a case for anything but an eventual redistribution more in favor of the workers.

Taking into account the fact that the war-destroyed capital is being reconstructed and that former living conditions are being restored on a self-supporting basis, we can still find significant grounds on which to criticize Norwegian planning. In the first place, the general planning has been too much on a short-run basis of one year. In specific industries (notably shipbuilding and housing) long-run plans have been made, but all these separate plans have not been integrated and published as a comprehensive national budget for, say, four years in advance. However, recent developments in connection with the Marshall Plan indicate that a complete four-year program is to be, or already has been, drawn up. Most other countries which have employed methods of economic planning, either in Eastern or Western Europe, have found it extremely useful to lay plans for as long as four or five years. The Dutch plans, which probably resemble Norway's as much as most others in Europe, have been very largely influenced and helped by the construction of the "raamplan" extending over a period of five years.[6]

A danger which besets all planned economies may be called the problem of "the number of degrees of freedom." There is always the possibility that central planners will try to control too many things at once. Given the technological possibilities of the economy and given the markets that are to be left free, there is only a fixed number of variables at the disposal of the authorities. In the National Budget

[5a] There have been some isolated strikes in the autumn of 1948, but no dominant strike wave throughout the country.

[6] See *Centraal Economisch Plan: Eerste Nota (Globaal Plan) 1947*, Centraal Planbureau, 's-Gravenhage, Sept., 1946, esp. bijlage II, p. 18.

for 1947, a rather complete national accounting system was utilized to bring about mutual consistency among all the plans, but the *definitional* relations contained in the national accounting systems are not enough by themselves. In addition, such things as the production functions, consumer demand for unrationed goods, tax laws, the supply of labor, etc., must all be systematically taken care of as side conditions.

This aspect of the planning problem was not completely thought out in the first Norwegian plans, mainly as a result of the urgency of the situation, requiring quick decisions. But the latest National Budget gives a much more systematic treatment so that the authorities are well aware of the available degrees of freedom. The final section of the National Budget for 1948 deals with an "aktiviseringsplan" (activisation plan) in which the planning problem is properly stated in terms of welfare economics. The continuing work along this line is certain to lead to a more satisfactory theoretical basis for Norwegian planning and to contribute to a solution of the problem of the number of degrees of freedom.

Even if the authorities have not tried to control too many things at once, regulations may become unnecessarily burdensome in another way. There has been a tendency in Norway to prefer more indirect controls on the assumption that they are less of a burden than direct controls. For this reason, taxes have become quite oppressive. Although taxes are an indirect control, they are criticized more by the general public than many forms of direct, quantity-regulating controls. The government is only fooling itself and not the people if it thinks that indirect controls are not felt. One gets the impression that certain types of taxes have become altogether too burdensome and oppressive and that other measures (direct and indirect) should be substituted.

A general criticism of Norwegian planning is that it has remained too much in the government offices and too much on paper. The average citizen knows very little about the government plans and has certainly not read the National Budgets. Public relations have been conducted very poorly in the sense that no popularly readable version of the National Budget has ever been presented to the population. Moreover, the government has not aggressively carried out many features that are written into the plan. Two examples worth pointing out are the programs for recruiting women into the labor force and increasing tourist income. A vigorous approach towards the furthering of these programs would help to overcome two of the main shortages in the present economy—the shortage of labor power and the shortage of foreign exchange. The inducement of women out of the home into paid work rests on the supply of social amenities such as cheap laundries, mending services, nurseries, etc., by the government, but this has not

been done. The attraction of more tourist income rests upon the diversion of construction and other resources into comforts that hard-currency tourists demand, but it seems to many travellers that Norwegian tourist facilities and information lag behind those of other Western European countries.

Thus far, this critique has concentrated on things that could be accomplished without too much difficulty within the present political framework, but we should not close without going more deeply into the fundamental problems that must be faced in the future if planning in Norway is to be successful in the longer run. Usually, planning is identified with socialization or nationalization of industry. This is true throughout Eastern Europe and extends to the British labor government in Western Europe. The Norwegian Labor Party is committed to a long-run policy of nationalization, but as yet nothing of consequence has been done along these lines.[7] However, it seems essential to many economists that nationalization must be considered as the key to the solution of some important present and future problems. These problems may be entitled "Planning in a Partially Planned Economy" and "Planning in an Unplanned World."

In the partially planned economy, actions in the private sector often run counter to the plan and even have a tendency to defeat it. One of the principal Norwegian examples of this phenomenon occurs in domestic trade and commerce. The national product originating in the trading sector of the economy has been above the amount planned, and it is also known that the 1947 National Budget even made an allowance for an expansion of employment in trade, undesirable though this expansion may have been. If trade and commerce were nationalized, exchange could be carried out in larger and more efficient establishments with a conservation of scarce manpower. Furthermore, the central authorities would then have a direct control over the employment demanded in this sector of the economy.

In many other sectors of the Norwegian economy, production and employment are controlled by the allocation of scarce raw materials, especially those which are imported. Nationalization is not immediately the main issue in industries which can be so regulated, but there is an unfortunate clause in the Bretton Woods Agreements, of which Norway is a signer, that calls for the abolition of all import and exchange controls by 1952. If this is taken to mean that Norway must cease to

[7] Since the end of the war, some public utilities have been nationalized, and some new plants have been built in whch the state is the owner. Also enemy interests in Norwegian industry were in many cases taken over by the state. This in large part is the extent of the move toward nationalization. The establishment of joint production boards (workers and employers in single firms) and industrial boards (workers, employers, and the state for a total industry) has served to give the workers some voice in the operation of the productive resources in addition to the direct nationalization.

license imports and ration foreign exchange, it also means that she will have to give up much of her planning in the future.

In retrospect, it seems that this requirement is particularly unsatisfactory and will do more harm than good in the world economy. As was remarked above, the price-wage stabilization and economic recovery were part of the entire plan. If imports were to be admitted freely into Norway, and if subsidies were to be prohibited (also as a part of the Bretton Woods Agreements), the only way to prevent a rapid exhaustion of exchange reserves would be to allow very large increases in the prices of imports. This would raise the cost-of-living and break the entire domestic wage-price stabilization program that has worked so admirably already. Not only would the unplanned economies' inflation be imported to Norway, but also many trivial and luxury goods would be imported that are in no way related to a plan for rational economic development.

The licensing system, as it has been carried out so far, has represented a workable cooperation between private enterprise and the government leading to a highly satisfactory allocation of scarce resources.[8] Either the Bretton Woods Agreements must be modified (or ignored) or some roundabout method adopted to circumvent the Agreements. One method would be to nationalize all foreign trade. This is a further reason why the Norwegian planners must go further with the techniques of planning and consider already the possibilities of nationalization of a larger sector of the economy.

The most refreshing aspect of Norwegian economic planning has been the attitude of the guiding economic theoreticians to disregard all preconceived notions about the supposedly optimal properties of a free-market economy and to look for direct or indirect controls that will lead to an even higher level of economic welfare. They have done this work entirely in the democratic spirit so that one cannot find the slightest trace of the suppression of any fundamental human right in present-day Norway. It is not known though what the future political developments will do to Norwegian economic planning; its fate depends on the results of the next elections in 1949. It is certain, however, that the matter will be decided in a democratic environment.

[8] Compare the recent Swedish experience in which the postwar importing spree resulted in a rapid and unexpected depletion of exchange reserves along with the importation of many unessential or luxury goods that represented an unwise use of scarce resources. Another example of the unsatisfactory character of the uncontrolled system is the Norwegian experience of 1919-1921. At that time Norway came out of the first World War with large liquid assets coupled with a dearth of consumer goods. The foreign exchange was rapidly used up, and Norway was forced to take a loan from the United States at an extraordinarily high interest rate. The result was a drastic curtailment of essential imports and an employment crisis following.

EXIT BASING POINT PRICING

By Frank Albert Fetter*

I. *Background of the Recent Cement Decision*

Sixty-eight years ago three steel mills in New Jersey and eastern Pennsylvania, the only considerable producers of steel bars in the United States at that time outside of Pittsburgh, stopped quoting the price of steel bars f.o.b. mill and began quoting only delivered prices identical at every destination with those of the Carnegie plant in Pittsburgh. This followed the example of the German steel cartel founded in the '70's. Thus began the so-called "natural evolution" of the basing point practice in the United States.

In the next twenty years this practice was extended to all branches of the steel industry and to the cement industry which was already connected with steel by various bonds of ownership. Then the practice was gradually extended to the sale of many standardized heavy basic products, including most building materials, and became the chief instrument by which American cartels have exercised a control over prices.

For forty years this pricing practice largely escaped notice, and, when it was glimpsed, its real nature was misrepresented by the industries and misunderstood by the public, the courts, the Congress, and the executive agencies. This was notably so in the dissolution suit against the United States Steel Corporation which ended in 1920 with the vindication of the Corporation, and also in the Cement Manufacturers' Protective Association case concluded in confusion and failure in 1925.

Meantime, however, the practice had been dragged out into the open and its real nature partially disclosed by the complaint against the U. S. Steel Corporation in 1920 by the Federal Trade Commission on the petition of numerous manufacturers in the Chicago region who had to pay Pittsburgh-Plus prices for the basic steel which they used in fabricating agricultural implements and other finished products. The Commission's order to cease and desist, issued in 1924, was mockingly accepted by the Corporation, and was negligently left unenforced, but it marked the beginning of a quarter century of open and intense legal and economic discussion, concluding with the decision of the Supreme Court April 26, 1948 in the case against the Cement Institute and

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others, definitely outlawing the practice. This decision, the most thorough-going ever rendered under the anti-trust laws, cleared away all doubt as to the jurisdiction and competence of the Federal Trade Commission in such matters, as to the meaning of various economic terms in the statutes, and as to various legal technicalities which had long been pleaded in defense of the basing point practice. The Supreme Court which, with successive changes in membership had long groped its way painfully through misleading evidence and confusing arguments of counsel, attained, in the studious opinion read by Justice Black, the high point of understanding of competitive and monopolistic practices. The cement industry and the steel industry, the elder ally in the defense of the basing point practice, acknowledged that they were at the end of the judicial rope. Financial writers declared the change to be "epochal" and that "an industrial revolution is under way."

II. *Legal and Economic Issues*

Among the various aspects of the basing point practice—historical, biographical, anecdotal, economic, legal and practical in effects on profits, on the location of industries, and on the welfare of particular communities and of the nation as a whole, the most significant are the economic theories which have been offered to justify the practice as competitive. The practice may be attacked in the courts as unlawful under the Sherman Act, or under the Clayton Act, or under the Federal Trade Commission Act. Suits and complaints were, in fact, brought against it at various times under all three statutes, but cases under the Sherman Act came to nothing, and those in which the practice met disaster in 1945 and 1948 were brought by the Federal Trade Commission under the two later acts. The more prominent of the two is the Clayton Act making it "unlawful to discriminate in price," with the puzzling proviso in the original act permitting discrimination when "made in good faith to meet competition," or in the Robinson-Patman Amendment, Section 2(b), when "made in good faith to meet an equally low price of a competitor." Practices which have not yet "grown into Sherman Act dimensions" may be restrained under the Federal Trade Commission Act as unfair competition (dictum in the recent decision). To a most unusual degree, if not entirely, the legal decision whether the practice is lawful or unlawful depends in all cases on the economic decision whether the effect of the discrimination involved in the practice "may be substantially to lessen competition or tend to create a monopoly in any line of commerce, or to injure, destroy, or prevent competition," etc., (language of the Robinson-Patman Amendment).

III. *The Existence, or Reality, of the Basing Point Practice Long Denied*

The first argument in order of time advanced to justify the basing point practice was to deny its reality as anything different from f.o.b. mill pricing plus actual freight. It was claimed that sellers were compelled to quote delivered prices in that way because buyers wish to know how much the commodity will cost delivered. The false implication was that sellers could not quote f.o.b. mill prices plus actual freight in that way, or that if a buyer is told the f.o.b. mill price, he cannot in a few minutes learn what the all-rail freight will be from any mill. To calculate the delivered cost of the commodity then would require no more than a knowledge of elementary arithmetic; yet this shallow fallacy was accepted by two of the three judges in the 7th Circuit Court of Appeals, in these words: "The reason buyers are so insistent that cement be sold at a destination price is their desire to know what it will cost them delivered," (157F. 2nd-541). A delivered price in the generic sense of delivered cost quoted to buyers is the sum of two prices, the seller's price for the commodity and the price of transportation to the buyer's destination. But there are two species of delivered prices, innocent f.o.b. mill "delivered prices" which are the sums of the shipping mill's base price and actual freight to destination, and basing point delivered prices (now declared to be unlawful) which are the sums of another mill's base price plus what the freight would be if the commodity were shipped from that mill. In the one case both prices in the so-called "delivered price" are real; in the other case both are fictitious and arbitrarily assumed.

IV. *Claim That It Was Not Regularly Maintained*

Closely related to the argument just analyzed, or virtually the same, is the claim often made by counsel for the cement industry that while basing point prices were quoted as a rule, genuine f.o.b. mill prices were quoted on request (with the implication that this was always done). Considerable testimony, pro and con, was heard on this subject. As late as 1946, two of the three judges in the 7th Circuit Court of Appeals repeatedly accepted this impossible claim at face value: "Some was sold on an f.o.b. plant basis, and the Commission made no finding of a refusal on the part of respondents to sell on the latter [f.o.b mill] basis" (157 F. 2nd 541. Also 575 and 577). To the same effect, as showing that no system of basing point prices was regularly maintained, this Circuit Court opinion declared that "some of the petitioners were pursuing one course and some another" (*idem,* p. 553). Yet anyone with an elementary understanding of the basing point practice must

know that if such an option were open to buyers, a basing point system of prices would be at once disrupted. There is here again the erroneous implication and belief that there is really no difference between f.o.b. mill pricing and basing point pricing, or between the systems of prices which result from them. The testimony in this manner, given in vague phrases by hard-pressed company employees, could mean no more than that the prices quoted by a base mill *within its "natural territory"* are f.o.b. delivered prices; or, as was shown by other evidence, that alleged f.o.b. mill quotations given on government purchases were counterfeits, being the discriminatory mill net price resulting from the basing point rule; or in rare cases that the f.o.b. prices were quoted in brief periods by recalcitrant mills when the basing point system had temporarily broken down.

Moreover, a great body of evidence in the record exposed the various measures taken to police the system by specific job contracts, by refusing to permit the use of trucks or other cheaper means of transportation, by imposing punitive bases upon recalcitrant mills, etc.,—all to prevent the slightest departure from the basing point formula by the use of f.o.b. mill prices or in any other way. All this would have been useless effort if basing point delivered prices had been merely f.o.b. mill prices plus actual freight.

V. *The Surplus-Deficit Argument in the Pittsburgh-Plus Case*

Next in order of time came the surplus-deficit argument to justify the basing point practice. It was born in academic halls and made a modest appearance first in the steel dissolution suit. It was said that an undefined area around Pittsburgh, where a large part of the nation's steel-producing capacity was concentrated, was the one surplus area of steel production, and every other region was a deficit area, producing less steel than it consumed. The natural market for Pittsburgh steel, it was said, was all over the country, and the delivered cost at every destination was properly the Pittsburgh base price plus actual freight from Pittsburgh. This theory so impressed Justice McKenna and the majority of the Supreme Court that they gave it much weight in their decision exculpating the U. S. Steel Corporation.

The surplus-deficit argument appeared full grown in the proceedings under the Pittsburgh-Plus complaint against the U. S. Steel Corporation issued by the Federal Trade Commission in 1920, the very year of the steel dissolution decision. On the same economic advice it was presented to justify the sale of steel produced at the Corporation's plants in Chicago and at Gary at the delivered cost of the Pittsburgh base price plus full freight from Pittsburgh to Chicago. It was reported that economists of the Commission, overawed by the decision in the dissolution suit, pronounced this argument unanswerable, and it

was thought the complaint would therefore be dismissed by the Commission. It was at this stage that Judge Gary, president of the U. S. Steel Corporation, was quoted as saying confidently: "This case is 95% economics and only 5% law." Something like panic struck the Associated States Opposing Pittsburgh-Plus, an organization of some seventeen states which, backed strongly by public and political opinion in the midwest, was supporting the complaint. The proceedings were hastily halted, and Professor John R. Commons was persuaded to take a leave of absence from the University of Wisconsin to study the economics of the problem. He and two colleagues, one from Harvard and another from Princeton, made such a study, and in December, 1923, gave in evidence their conclusions in refutation of the surplus-deficit theory.

They called attention to the unquestioned fact that the mills in and near Chicago, including Gary, the new highly efficient mill in Indiana, were producing large quantities of steel and were supplying a large part of the steel bought in and near Chicago, while at the same time they were shipping large quantities eastward for a considerable distance, not infrequently as far as Pittsburgh and beyond. In the latter case these sales netted a price *less* than the Pittsburgh base by the amount of the freight from Chicago, whereas sales in Chicago netted the full Pittsburgh base price *plus* imaginary freight, called phantom freight, from Pittsburgh. There was thus a large amount of wasteful cross-hauling between the two regions. The so-called deficit in the Chicago region was largely, if not wholly, the result of shipping steel eastward into the Pittsburgh region, and Pittsburgh in turn became a deficit region by shipping too much of its steel to Chicago and elsewhere. The answer to the surplus-deficit area argument is "the economic law of market areas," by which it is shown that when mills in any location sell independently and competitively without discrimination in price, they can sell a gradually increasing product only by decreasing their base prices so as to extend the area in which they can sell. The boundary between the sales areas of two mills really competing in price is determined by the comparative base prices and actual freights to each destination, the lower a mill's comparative base price the larger its sales area. Since that time the surplus-deficit argument has not been seriously offered in court as a defense of the basing point practice, but it has never fully lost its popular appeal. It sounds plausible.

VI. *Claim that Discriminatory Basing Point Prices Are Uniform Prices in a Normal Market*

Next in order of time came the bogus uniform-price theory, presented in the old Cement case decided in March, 1925. An economic witness testified that the identical delivered prices for cement quoted by all

sellers at each destination are what is meant by uniform prices in a normal market as defined by seventeen "distinguished economists" whom he named. The witness was not cross-examined and no other economic testimony was heard. Strangely in conflict with usual rules of evidence and misled by this testimony, Justice Stone, speaking for a majority of the Court, said: "A great volume of testimony was also given by distinguished economists . . . that . . . uniformity of prices will inevitably result from active, free, and unrestrained competition," (as the context shows) "in a normal market" (268 U. S. 605-606).

Each destination is not a normal market where numerous buyers and sellers assemble and where there is "active, free, and unrestrained competition," as the necessary conditions of a truly competitive price. To assume these conditions as present is to beg the whole question. Yet from this distorted evidence the Court inferred (6 to 3) that the basing point pricing system is competitive and lawful. For twenty years this decision was the main legal defense of the basing point practice. During this period economic witnesses employed by the cement and other industries developed to the farthest extreme the claim that every basing point destination is a normal market in which the delivered price is determined by the free play of demand and supply, independently of the price at any other destination. *Ex parte* witnesses persisted in this claim when confronted with the evidence that the bids of numerous sellers for delivery at fifty or more destinations were identical and were all mathematically related to a single base price (that of the nearest mill) by the basing point formula. An expert in the theory of mathematics testified that if in those cases each of the independent bidders could bid only a cent below or above any of the others at each of these destinations, the chance that the bids would all be identical would be equivalent to picking one particular dime out of the space between the earth and the sun filled with dimes placed on edge. No one has ever ventured to question this mathematical disproof of the bogus economic claim that each destination is a normal market.

VII. *Argument that the Price of a Commodity Means Delivered Price Which Includes Freight*

The meaning of the term price in the phrases of the statute referring to a discriminatory price became a prominent issue during the consideration of the Robinson-Patman bill to amend the Clayton Act in 1936. At the outset, undoubtedly, the sole purpose of the sponsors of this bill was to relieve independent retail merchants from the unfair competitive disadvantage under which they were believed to suffer because chain stores could buy at excessive discounts. However, in the

course of the year-long discussion, this purpose became increasingly confused. Fairly late, a definition of price as the net realized amount received by the seller of a commodity was inadvisedly introduced into the House bill with the avowed object of facilitating the prosecution of the basing point practice. This aroused the bitter hostility of the basing point lobby, and the sponsors of the bill eliminated it and other irrelevant matters in order not to endanger their real purpose. From that time until the recent Cement decision, counsel for the basing point industries have contended with more than doubtful logic that this negative action by the sponsors of the Robinson-Patman bill, without formal vote of the House, was equivalent to a positive vote by both houses of Congress to legalize the basing point practice.

VIII. *The Notorious Section 2(b) Argument*

The basing point interests in Congress did not overlook the opportunity to carry the war into the enemy's country. In a House Committee report before the final vote there appeared in the bill a new subsection 2(b), ingeniously worded and smelling of the Corporation lawyer's lamp, which read as follows: "Upon proof being made . . . that there has been discrimination in price . . . the burden of rebutting the *prima facie* case thus made . . . shall be upon the person charged." But to this is added the joker of the section: "Provided, however, that nothing herein contained shall prevent a seller rebutting the *prima facie* case thus made by showing that his lower price . . . was made in good faith to meet an equally low price of a competitor."

Who introduced this in Committee into the House bill, or just when, does not appear in the Record, but later a Senator from New Jersey moved the incorporation of this section into the Senate bill, disavowing any personal responsibility and explaining that he acted at the request of the milk producers of his State (*Congressional Record,* 74th Cong., 2nd sess., Vol. 80, Part 6, p. 6435). However, the milk producers of New Jersey or of any other state have never made use of section 2(b), whereas the cement and other basing point industries, which did not appear openly in favor of this proviso, have always claimed that it legalized the basing point practice, as doubtless was the intention of those who somehow smuggled it into the bill.

The sponsors of the Robinson-Patman bill evidently did not know what this subsection meant. They waived aside the repeated question with the vague assertion that it was "merely procedural." When harder pressed, they suggested that it simply gave the seller the right of self-defense, that is, the right to discriminate in price when a competitor had previously done so unlawfully. It is not clear whether they meant that unlawful discrimination by both parties should continue per-

petually with no attempt on the part of either to invoke the protection of the law. "In good faith" is a mystic phrase whose interpretation calls for knowledge of men's secret motives, and which has never, to date, been positively interpreted judicially. The *prima facie* case thus made is the fact that there has been discrimination. That fact is not rebutted by showing that this was "to meet an equally low price" previously made by a competitor, for this is always the motive of discrimination. How, then, or why, is that a justification of the unquestioned fact of discrimination? In the end, the Supreme Court spelled the riddle in the only sensible way, by recognizing that *no* action which restrains competition and is an exercise of monopoly can be competition in good faith. To say that it can is self-contradictory.

IX. *The Overhead-Cost Argument that Dumping Decreases Producers' and Consumers' Costs*

When overhead-cost doctrine came into vogue, a plausible argument was derived from it to justify freight absorption and dumping by a mill into the territory of other mills. Thereby, it was argued, a mill *may* decrease "its unit cost of production at its factory" and *may* then decrease its base price and the delivered cost even to nearby buyers. There are two doubtful maybe's in this argument. It is doubtful in any specific case whether a mill can decrease its unit cost of production by more than the cost of absorbing freight, and it is certain that it can do so only under exceptional conditions. It is still more doubtful that if a mill profits by freight absorption it will pass on the saving to its customers. Why should it? Moreover, freight absorption is rarely unilateral, but usually mutual, so that what one mill reputedly gains in sales and profits, the other loses, and the reputed gains cancel. The industry as a whole can no more increase its sales and reduce consumers' costs by mutual dumping than men can lift each other by pulling at each other's boot straps. Although the argument was accepted at face value by two of the three judges of the Circuit Court of Appeals (157 F. 2nd ser. 559), it did not impress Justice Black and his associates.

The overhead-cost argument has been applied in a limited manner to the steel industry, and a whole book was written in the attempt to prove that, because of the very large investment in that industry, competition is impossible and monopolistic pricing is inevitable. This conclusion is contradictory of all the other arguments to justify the basing point practice, for they insist that it is truly competitive. Moreover, as presented, it did not apply generally to other industries but to steel alone.

X. *The Local-Monopoly Argument to Justify Freight Absorption*

The decisions in the two corn products cases in 1945 (the Corn Products and the Staley cases) seemed to opponents of the basing point practice to outlaw it in all its aspects; but defenders of the practice persisted in the contention that these decisions outlawed only phantom freight, not freight absorption. In the final stages of the cement proceedings in the Circuit and in the Supreme Court, counsel for the industry focussed their efforts upon proving the two-fold thesis that departure from a uniform f.o.b. mill base price, so as to match the delivered prices of other mills, is real competition, whereas preventing freight absorption would make every mill a local monopoly having power to raise its base price indefinitely. Just how much was not indicated, but the alarming suggestion was that the sky would be the limit.

Unless both propositions in this complex argument are proved, the whole argument fails. Two of the three Judges in the Circuit Court accepted both as valid, but the Supreme Court examined and rejected the first proposition in detail and passed over the second proposition as being evidently inconsistent with the decision of the first. Yet those who have announced their intention of persuading the next Congress to legalize the basing point practice found their contentions and their hopes mainly, if not entirely, on the local monopoly argument. The Court's decision that the practice is monopolistic would still be true if Congress were to legalize it. Congress would merely be legalizing monopoly to the abandonment of the policy of the antitrust laws and of a system of free enterprise.

XI. *Comparison of the Effects of F.O.B. Mill Pricing with Those of Freight Absorption*

It is desirable, therefore, to compare in some detail the results of the two methods of pricing in respect to competition and monopoly. It may be taken as agreed that both competition and monopoly are rarely, if ever, perfect or complete. Somewhere and somehow either is likely in practice to be somewhat limited. The real question is whether freight absorption or f.o.b. mill pricing more nearly results in the fair and free competition which is the ideal of antitrust law policy. The list of contrasts here given is not exhaustive, but serves to indicate the main aspects of the subject, all more or less interrelated.

1. F.o.b. mill prices are uniform to all buyers at the mill, and the delivered costs to the buyers at various destinations differ according to the actual freight from the shipping mill; whereas, when freight is

absorbed, the prices realized are not uniform and they vary according to the all-rail freight from some other mill.

2. F.o.b. mill quotations of delivered costs are not identical as between different mills at most locations, but only at some points and marginal zones between mills; whereas the quotations of delivered costs by mills absorbing freight in a basing point system are identical at every destination on the map.

3. F.o.b. mills sell to all their customers alike at one place as in a regular market; whereas mills absorbing freight treat each destination, by a legal and economic fiction, as a separate market.

4. F.o.b. mills give all buyers access to the same place of sale as in a regular market, and treat them all without discrimination; whereas basing point mills deny buyers common access, but deal with them only at separate destinations; that is, mills absorbing freight refuse to quote genuine uniform mill prices, for to do so would destroy the basing point system.

5. Each independently owned f.o.b. mill can determine its own base price and thus its delivered cost to all destinations according to supply and demand conditions, and by lowering its base price can exclude other mills from its territory, thus making for the independent fixing of base prices and their more frequent variation as in a regular market; whereas mills which absorb freight have far more static base prices in disregard to changes in business conditions in their territories.

6. F.o.b. mills realize the same net prices on sales to buyers from different destinations as in a regular market; whereas basing point mills, absorbing freight, collect higher net realized prices from buyers near the mill, thus reversing their geographical relations.

7. F.o.b. mill pricing protects the smaller enterprises from coercion and discipline through freight absorption by the price leaders and stronger financial corporations; whereas freight absorption enables price leaders to coerce their smaller rivals not only by matching their delivered quotations, but by punitive bases, to the point of bankruptcy.

8. Buyers on the boundaries around the market areas of f.o.b. mills have a constant price motive to choose between sellers and to shift from one to another, thus taking part in the determination of base prices; whereas, since by means of freight absorption quoted destination costs are identical, all buyers lack any price motive to choose between sellers.

9. F.o.b. mills cannot raise their base prices in comparison with adjacent mills without restricting the area in which they can sell, and thus reducing their sales, so that their potential monopoly power is

strictly limited; whereas basing point mills can raise their mill base prices without restricting the area of their sales anywhere.

10. F.o.b. mills having excess capacity can, by reducing their base prices, extend the areas in which they can sell to the exclusion of other mills; whereas basing point mills cannot exclude other mills in this way.

11. F.o.b. mills having excess capacity have constantly the motive to reduce base prices in order to increase their sales area; whereas basing point mills have no such motive.

12. F.o.b. mills are frequently under the pressure of geographical marginal competition not to raise their base prices but rather, in order to retain and attract buyers, to reduce base prices uniformly to all buyers as in a regular market, this being the one effective form of price competition possible, according to the f.o.b. rule, among isolated mills; whereas basing point mills, by absorbing freight, limit to the particular sale the effect of geographical marginal competition upon their net realized prices, while exploiting their monopoly power by continuing to collect higher prices from nearer buyers.

13. F.o.b. mill base prices are thus largely determined by the forces of supply and demand in the territory surrounding each mill, as in a regular competitive market; whereas basing point base prices are determined by the price leaders solely by the monopolistic principle of charging what the traffic will bear in the absence of effective price competition.

14. F.o.b. mill prices do not include freight, and the buyer is permitted to choose whatever cheaper means of transportation he prefers—it may be in his own trucks or by water carriage; whereas the freight element in basing point delivered prices arbitrarily includes the all-rail rate regardless of the buyers' preference and of the actual freight. F.o.b. mills thus permit buyers to choose the most economical means of carriage, while basing point mills force the buyers to use and pay for wasteful and more costly transportation.

15. F.o.b. mills do not engage in wasteful cross hauling which adds to their costs; whereas freight absorption leads to wasteful cross hauling and adds to the total costs of the industry. Unless the basing point industries can shift this wasteful cost to the consumers by charging higher prices, it is reasonable to conclude that they would not favor the retention of freight absorption.

16. F.o.b. mills leave buyers free to deal directly with common carriers; whereas basing point mills deprive shippers of this essential right in a free economic system.

17. The one effective argument of an f.o.b. mill in selling a homo-

geneous product is a lower base price which results in uniformly lower delivered costs to buyers; whereas basing point mills do not offer this inducement to buyers, but must resort to costly selling efforts, without price or cost inducements, which must be paid for in the long run by the consuming public.

18. F.o.b. mill pricing is favorable to the establishment and survival of small business in the zones between the older mills, where delivered costs to consumers are at the maximum, and where a small business, if secure against dumping, can begin with a limited line of products and sell them profitably at lower delivered costs and then gradually reduce its uniform base prices as its capacity increases; whereas the older mills can, by absorbing freight locally, at once strangle the young enterprise in its infancy without reducing prices to other buyers.

19. F.o.b. mill pricing is therefore favorable to the geographical decentralization of the physical capacity in an industry, and tends to create and preserve a larger number of smaller plants; whereas freight absorption tends to centralize production in fewer large plants.

20. F.o.b. mill pricing is more favorable, for the same reason, to the independent ownership of separate plants; whereas freight absorption is favorable to financial merger and consolidation, which gives greater control over prices by price leaders, and eliminates completely whatever competitive influence the smaller enterprise may have exercised.

21. F.o.b. mill pricing makes the task of administering and enforcing laws against unfair and discriminatory prices as simple and practical as is possible; whereas if freight absorption is permitted, either sporadically or systematically, the task of enforcement agencies is practically impossible.

22. Finally, it is apparent that there is in the situation of every more or less isolated enterprise an inherent possibility of monopoly, which becomes a certainty without geographical marginal price competition. F.o.b. mill pricing is the sole effective means of preserving and enforcing in large measure this kind of competition; whereas freight absorption exploits that monopoly power to the fullest extent that ingenuity has been able to devise.

XII. *The Supreme Court's Verdict on the Arguments to Justify the Basing Point Practice*

All the arguments in favor of the basing point practice outlined above (Sections III to XI) were urged forcibly and in detail upon the Supreme Court, and all of them were unqualifiedly rejected. Leaving no loophole open, Justice Black concluded the opinion of the Court

with the broad statement: "Many other arguments have been presented by respondents. All have been examined, but we find them without merit." Under present laws and present public policy the basing point practice is declared by our highest Court to be a form and method of monopoly. It is definitely out, according to accepted antitrust law policy. Moreover, this is fully recognized, under advice of counsel, by the leading basing point industries, and they have announced their intention to persuade the next Congress to legalize the practice, despite the judgment of the Supreme Court. Inded, they have already set in motion powerful forces to attain that end. It is clear, in the light of the recent decision as to the monopolistic nature of the practice, that this would be not simply a change in statute law, but a revolution in fundamental antitrust law policy and a long step toward the acceptance of a universal system of industrial monopoly.

THE EFFECT OF RECENT BASING POINT DECISIONS UPON BUSINESS PRACTICES

By CORWIN D. EDWARDS*

There has been a great deal of alarm and much confusion among businessmen about the anticipated effects of decisions by the Supreme Court in the basing point cases. So far as I know, nobody has asserted that these decisions will throw us into a major depression or deprive us of our foremost place in productivity among the nations of the world. But short of this, disastrous forebodings have been freely indulged. We are told that the centers of industrial production will be ruined because they will lose their business to producers who are nearer the consuming markets. At the same time, we are told that the buyers in these consuming markets will be ruined because they cannot get supplies close at hand and therefore must pay prohibitive prices or move to the centers of production. The Pittsburgh-Ohio area, New England, the Chicago area, the South, the West, each, we hear, is to lose business to competitors, though it is not indicated where the competitors are to be located who will take over this business.

A picture so distorted is obviously the product of confusion, some of which may have been fostered by self-interested propaganda. My purpose is to offer what I believe is a more realistic account of the probable effect of the basing point decisions upon businessmen.

The basing point cases which have been recently decided by the Supreme Court are the Staley, Corn Products, and Cement cases. In addition, the Circuit Court of Appeals has upheld the Federal Trade Commission in the Conduit case and the Commission has issued an order not yet reviewed by the courts in the Crown Bottle Cap case. Moreover, an order issued by the Commission in 1924 in the Pittsburgh Plus case was belatedly appealed by the respondents and is now pending before the courts.[1] These are the cases in which the Commission has found an illegal effect under competition and in which the courts have sustained or are being asked to sustain the findings.

What were the facts in these cases? The Staley and Corn Products

* The author is chief economist and director of the Bureau of Industrial Economics of the Federal Trade Commission. This article consists of the major parts of two speeches which he delivered before the New England Council at Dixville Notch, N.H., on September 18, 1948, and before the Chicago Association of Commerce and Industry at Chicago, Illinois, on October 6, 1948. In these speeches, he indicated that he was expressing his own views and not necessarily those of the Federal Trade Commission.

[1] On October 5, 1948 a consent order was entered by the court affirming the Commission's order in this case.

cases involve price discriminations by two different concerns engaged in the sale of corn syrup and related products. The Corn Products Refining Company has plants in Chicago and Kansas City. The Commission found, however, that sales were made as though the product was all shipped from Chicago. The effect was that in Kansas City, when the delivered price was $2.49, 40¢ of this price consisted of a fictitious freight charge for a shipment from Chicago which was not actually made. At Lincoln, Nebraska, when the delivered price was $2.54, the company actually expended 13¢ to ship the goods from Kansas City, but computed the price to include a 45¢ freight charge which represented the cost of a fictitious shipment from Chicago, so that excess freight amounting to 32¢ was collected from the buyer. Similar practices prevailed at other delivery points. The effect of these charges was to give buyers at Chicago a systematic advantage over their competitors located in the Kansas City area. Many of these buyers were candy manufacturers who used glucose as the chief ingredient of their candies and operated on very narrow margins of profit and under conditions of intense price competition. The difference in the cost of basic raw material was great enough to diminish the ability of those who paid the high prices to compete with those who paid the low prices. Accordingly, the Commission found that price discrimination by Corn Products Refining Company and its sales subsidiary was injurious to competition and that the differences in price could not be justified by differences in cost such as would have made them lawful under the Clayton Act as amended. The Supreme Court upheld the Commission.

Staley Manufacturing Company is a producer of corn products located in Decatur, Illinois. It adopted the price system of Corn Products Refining Company so that it sold all its products as though they had originated in Chicago. Although it cost Staley 14¢ to ship a particular product to Chicago and only 10¢ to ship the same product to St. Louis, Staley charged the St. Louis customer 16¢ more than the Chicago customer because, if the goods had originated in Chicago, the freight charge to St. Louis would have been 16¢. The discriminations and the injury arising therefrom were similar to those shown in the Corn Products case. However, Staley offered as a defense the argument that it was merely meeting the prices already established by Corn Products and that it was authorized to do so under the law. The Supreme Court rejected this claim on the ground that it was not consistent with the facts. The court gave weight to such considerations as that Staley had not only absorbed freight in selling into territory which was near the Chicago plant of Corn Products but had also charged fictitious freight from Chicago in selling in territory which was nearer freightwise to Staley than to the basing point; that Staley had never tried to depart from the discriminatory pricing pattern established by Corn Products;

and that Staley had apparently not made any serious effort to determine whether it would encounter competition at any particular point before following the price formula at that point. The court said: "The Commission's conclusion seems inescapable that respondents' discriminations, such as those between purchasers in Chicago and Decatur, were established not to meet equally low Chicago prices of competitors there, but in order to establish elsewhere the artificially high prices whose discriminatory effect permeates respondents' entire pricing system."

It is noteworthy that in June, 1947, the Commission issued a complaint against Corn Products, Staley, and about ten other corporate interests, which together account for about 95 per cent of the corn derivatives made and sold in the United States, charging that these concerns have conspired to fix prices by various techniques, including the use of a Chicago basing point in computing delivered prices upon starch, corn oil, and corn sugar. If this complain is found to be correct, the previous Corn Products and Staley cases will be revealed as merely particular instances of the discrimination inherent in an industry-wide collusive plan.

In the Cement case, the Supreme Court sustained the Commission's finding that the Cement Institute and a large number of participating cement companies had conspired to fix prices by collectively using a multiple basing point formula. About half of the cement mills were located at basing points. The other mills sold their product as though it had originated at one of the base mills. In selling into the territory of any base mill, producers outside that territory, base mills and non-base mills alike, sold their product as though it had originated at the mill located at that particular base. In consequence, delivered prices at any destination were identical to the last decimal point, regardless of the origin of the cement or the distance it had travelled in reaching that locality.

Rigid adherence to so complicated a pricing system is itself indicative of a concerted plan. However, the Commission's proof of conspiracy did not rest merely upon analysis of the price structure. In 1934, a trustee of the Cement Institute wrote to another trustee of the Institute: "The truth is, of course—and there can be no serious, respectable discussion of our case unless this is acknowledged—that ours is an industry above all others that can not stand free competition, that must systematically restrain competition or be ruined. . . ." This is only the most explicit of a considerable number of statements in which various members of the industry made clear their intention to avoid price competition. The Supreme Court summarized other parts of the evidence as follows:

Among the collective methods used to accomplish these purposes, according

to the findings, were boycotts; discharge of uncooperative employees; organized opposition to the erection of new cement plants; selling cement in a recalcitrant price cutter's sales territory at a price so low that the recalcitrant was forced to adhere to the established basing point prices; discouraging the shipment of cement by truck or barge; and preparing and distributing freight rate books which provided respondents with similar figures to use as actual or "phantom" freight factors, thus guaranteeing that their delivered prices (base prices plus freight factors) would be identical on all sales whether made to individual purchasers under open bids or to governmental agencies under sealed bids.

The court also pointed out that recalcitrant producers were punished by punitive price wars localized in their home territory. In one instance, a new basing point was set up at the plant of the price cutter and was used to drive prices down to half of what they had previously been until he capitulated.

The court also sustained the Commission's finding that price discrimination was inherent in this conspiracy and that it had injured competition among those who had agreed not to compete with one another. The court rejected the contention of the respondents that they were merely acting in good faith to meet equally low prices of competitors; for an agreement to eliminate competition could not reasonably be interpreted as a mere meeting of competition.

In the Conduit case, the Commission's order was sustained last April by the Circuit Court of Appeals but has not yet been reviewed by the Supreme Court. The Commission found that the Rigid Steel Conduit Association and various steel and electrical manufacturing companies were engaged in a conspiracy to fix prices, control distribution, and eliminate competition by various methods, which included use of a basing point system with bases at Pittsburgh and Chicago, use of uniform consignment contracts, fixation of trade discounts, joint classification of customers, investigation of prices in closed transactions, and various other concerted trade practices. Most of the constituent parts of this program were adopted concertedly through the trade association or in meetings of the manufacturers. For example, an agent of the Garland Manufacturing Company wrote in January, 1948:

> I attended another meeting of the labeled conduit manufacturers today at the New York Athletic Club. . . . Several projects were discussed as to prices and agreements that had been made but nothing was pinned on to any of those present, which was in accord with our agreement to maintain card 76 on any new projects that might come up after our first meeting.

The place of the basing point system in this collusive arrangement was made evident in the association's rate bulletin of January 1, 1937, which carried as a foreword the statement:

The freight rates listed herein are to be used to ascertain delivery charges in figuring f.o.b. destination prices to all points in the United States and their possessions. Where the freight rates shown are from Pittsburgh, Pa., the Pittsburgh basing prices must be used. If the freight rates shown are from Chicago or Evanston, Illinois, the Chicago or Evanston basing prices must be used.

In this case the Commission not only found that the members of the industry had conspired to adhere to the basing point system, but also charged and found separately that each individual producer had adopted the system in the knowledge of the fact that the others were likewise doing so and that thereby price competition had been eliminated in violation of the Federal Trade Commission Act. This second count in the Commission's case has been discussed by some commentators as though it meant that the FTC Act would be violated if a single company were to follow a basing point system, regardless of whether or not other concerns in the industry did so and regardless of the effect upon price competition in the industry. This charge rests upon a concert of action which brings about an economic effect indistinguishable from the collusion which is also charged in the same complaint. From a layman's point of view, the difference between this charge and the ordinary charge of collusion consists in the kind of evidence needed to prove the case rather than in any change of the conditions under which a basing point system is open to attack.

In the Crown Bottle Cap case the Commission found that the Crown Manufacturers Association and 12 member companies had conspired to fix prices and suppress competition in the sale of bottle caps by various methods, which included use of a standard sales contract; standardization of product; agreement on schedules of deductions, additions and differentials; and use of a freight equalization plan. Under the freight equalization plan every mill was a base, but adherence to the pricing formula was as rigid as in the systems previously discussed. Moreover, the Commission found that the members of the industry agreed upon uniform base prices at their mills and thus managed to make delivered prices identical in all localities. The Commission's findings and order in this case have not yet been reviewed in the courts.

In the Pittsburgh Plus case the Commission's findings are more than twenty years old, but the respondents' appeal is currently pending.[2] The Commission found that U. S. Steel Corporation and its subsidiaries were discriminating in price by quoting delivered prices consisting of a base price at Pittsburgh plus the freight from Pittsburgh to the

[2] See footnote on p. 828.

destination, regardless of the points from which the steel was actually shipped. At Chicago, for example, a product which was made in Gary carried a fictitious freight charge of $7.60 a ton, which was the cost of an imaginary shipment from Pittsburgh. The fabricators of steel who paid the high prices were unable to compete toward Pittsburgh against the favored fabricators who were located in the Pittsburgh area, and conversely the Pittsburgh fabricators were enabled to compete in Chicago without any disadvantage due to their remoteness from the Chicago market. The discriminations arising from the imaginary freight included in the delivered prices were greater in many markets than the average net profit which the consumers of the steel were likely to realize in their fabricating activities. The result, the Commission found, was that some steel users had been forced to discontinue the manufacture of a variety of products and that the business of Western fabricators generally could not grow as could that of those located in the Pittsburgh area. The Commission rejected the contention that the Pittsburgh Plus plan had been established in good faith to meet competition and in doing so concluded that the system had been established by collusive agreements and had been used from 1909 to 1924 as a device to achieve uniform delivered prices.

It should be noted that a proceeding is now under way in the Commission in which the American Iron and Steel Institute and the leading steel producers are charged with having conspired to fix prices by maintaining a price-fixing formula founded upon a multiple basing point system similar in many respects to that of the cement industry. After the Cement decision last spring, the principal steel producers announced their intention to abandon their basing point system and to substitute a system of f.o.b. mill pricing in order to bring their practices into line with what they understood to be the law in the Cement case, and changes in pricing methods have been made in the steel industry in accord with these announcements. Nevertheless, these same companies continued to resist the Commission's complaint in the steel case and to oppose the entry of an order which would prohibit the practices they have abandoned. Various spokesmen for the industry have stated that the law must be changed in order to avert the effect of the court decisions in the cases I have just described.

In all of these cases, the central condition which gave the basing point system its character and produced the circumstances upon which the Commission relied in attacking that system was, according to the Commission's findings or complaints, the existence of a conspiracy to fix prices, sometimes accompanied by a conspiracy to restrict competition in other ways. In the Staley, Corn Products and Pittsburgh Plus cases,

the Commission's proceeding was not directed against the price-fixing conspiracy but against the discriminations which it produced. Even in these cases, however, there is strong reason to doubt that discrimination so rigid and extreme could have been established and maintained had there not been a price-fixing arrangement to prevent the injured buyers from obtaining relief by taking their trade elsewhere. In these cases of discrimination, the injuries found by the Commission consisted in price differences large enough and important enough to the buyer to prevent the high-price buyer from obtaining business from the low-price buyer. In each case there was evidence not only that such injury could be reasonably anticipated but also that it actually occurred on a significant scale.

The Commission's basing point cases lie directly along the main road of the antimonopoly policy of the United States; the practices which were found in these cases were injurious in the same way and to the same extent as any other conspiracies to fix prices and as any other discriminations which materially handicap competitors; and it would be impossible to give legal sanction to these practices without exempting the respondent companies from the FTC Act and the Robinson-Patman Act.

The effect of the basing point decisions depends, of course, upon what was decided, what principles of law were determined or reaffirmed in these cases. Public discussion of the probable effects has taken as its starting point the false surmises that under the decisions every business enterprise is required to adopt an f.o.b. mill pricing system and that no enterprise may absorb any portion of the transportation charge which it incurs in serving its customers except in isolated and sporadic transactions. This particular formulation of the present state of the law is being so constantly repeated that some of those who have heard it now suppose that it is beyond question.

Strangely enough, this misconception has appeared even in legal documents. Recently, eight companies filed with the Federal Trade Commission a motion to dismiss the Commission's complaint in the Corn Derivatives case. The motion said:

> The fundamental issue in this proceeding is whether the Commission shall order the producers of corn derivatives to abandon any method of pricing other than one which will produce uniform mill nets after deduction of cost of transportation. This is the method of pricing imposed by the Commission in the Cement and Rigid Steel Conduit industries. . . . Whether or not this pricing method applied to *some* industries will have the salutary effect sought by the Commission, the Commission should not attempt to fit all industries into the inflexible pattern of a rigid and arbitrary economic theory.

On the basis of this interpretation of the Corn Derivatives case,

these companies argued that to require uniform mill pricing would hand over American markets to foreign producers, would close the plants of small producers, would give the largest producer most of the business, would injure labor and farmers in the Middle West, and would raise food prices. They advanced the remarkable argument that they should not now be subjected to legal proceedings because most of them had previously been defendants in earlier cases involving similar breaches of law—specifically in a Department of Justice suit in 1932 which was settled by consent decree and in Commission proceedings in 1938 and 1939 which were settled by consent order in the case of six respondents and by a victory for the Commission in the Supreme Court in the case of two other respondents.

The attorneys in charge of the Commission's case replied to the motion as follows:

> Respondents in their motion to dismiss have misstated the issue involved. The fundamental issue is not as stated by respondents. The issue raised under Count I of the complaint is whether respondents are restraining trade and maintaining monopolistic conditions through their maintenance of an unlawful price-fixing combination. Under Count II of the complaint the issue raises the question as to whether respondents are discriminating in price for the purpose and with the effect of eliminating price competition and promoting the maintenance of monopolistic conditions in violation of the Clayton Anti-trust Act as amended. No question is raised as to whether the Commission shall order the producers of corn derivatives to abandon *any method of pricing than that of uniform mill nets.*

The Commission's orders in the Cement and Rigid Steel Conduit cases, referred to in the motion which I have just discussed, do not justify the interpretation which was there put upon them. The order in the Cement case has been authoritatively interpreted by the Supreme Court. The Court used the following language:

> Most of the objections to the order appear to rest on the premise that its terms will bar an individual cement producer from selling cement at delivered prices such that its net return from one customer will be less than from another, even if the particular sale be made in good faith to meet the lower price of a competitor. The Commission disclaims that the order can possibly be so understood. Nor do we so understand it. As we read the order all of its separate prohibitive paragraphs and sub-paragraphs, which need not here be set out, are modified and limited by a preamble. This preamble directs that all of the respondents "do forthwith cease and desist from entering into, continuing, cooperating in, or carrying out any planned common course of action, understanding or agreement, combination or conspiracy between and among any two or more of said respondents, or between any one or more of said respondents and others not parties hereto, to do or perform any of the following things. . . ." Then follow the prohibitory sentences. It is thus

apparent that the order by its terms is directed solely at concerted not individual activity on the part of the respondents.

The Commission's order in the Conduit case has not yet reached the Supreme Court. Part of this order contains the same preamble which the court analyzed in the Cement case. Another part orders each of the corporate respondents individually to cease and desist from engaging in various pricing practices "for the purpose or with the effect of systematically matching delivered price quotations with other of said respondents or producing the equivalent of such matched delivered prices through systematic discriminations in the mill nets received on sales to different purchasers." The effect of this part of the order was to prevent the results of the previous conspiracy from being perpetuated by the momentum of the industry's established practices. There was a danger that respondents might continue to use substantially the same pricing formulas as before and thus maintain an identity of delivered prices equivalent to that which the Commission had found was the result of collusion; and there was a possibility that if this were done, the participating concerns might argue that, though the same pricing practices were still used and the same effect was still achieved, this condition was now the result of individual action rather than collusion. Without this language, if the order against collusion were to be violated, the Commission could not prove the violation except by retrying the whole case. With this language included, the Commission would have to prove merely that a price structure still persisted equivalent to that which had been established in the conspiracy.

It is not my purpose to attempt a comprehensive analysis of the law of the basing point cases. These illustrations have been offered merely to make the point that a great deal of our public discussion has started from a false premise. The facts are that only three basing point cases have reached the Supreme Court. In one of these, the Cement case, the court sustained the Commission's findings that members of the cement industry had conspired to fix prices by using a basing point formula and that price discriminations which impaired competition among the conspirators were inherent in the formula used. In the other two—the Staley and Corn Products cases—the court sustained the Commission's findings that competition among the customers of these companies had been injured by virtue of the fact that some of these customers had been charged substantially higher prices than others and thereby had been seriously handicapped in relative costs and in ability to sell their own products. In the Cement case, the Supreme Court reviewed the Staley and Corn Products cases and

offered the dictum that the combined effect of these cases "was to forbid the adoption for sales purposes of any basing point pricing system." Neither this nor the other dicta of the court in these cases can fairly be taken as indicative of an intent to require f.o.b. mill pricing or as a condemnation of the various alternative forms of pricing, such as pricing c.i.f. central market, zone pricing, uniform or postage stamp pricing, and pricing f.o.b. mill with various kinds and degrees of freight absorption.

In other words, realistic discussion of the effects of the Supreme Court decisions should be based on two starting points: First, that price-fixing conspiracies which rely upon common use of a basing point formula can now be reached under the law as readily as any other type of price-fixing; and second, that basing point systems which involve both freight absorption and phantom freight are likely to give rise to monopolistic conditions resulting from unlawful price discrimination and are unlawful if such conditions arise. Since use of such systems is hazardous, it may be that in practice they are likely to be abandoned even if they are not collusive in origin.

The effects of the basing point decisions upon business practice may be divided into those which arise in the transitional period and those which may be expected later.

Unfortunately, the transitional effects which are appropriate to an abandonment of basing point systems have not appeared alone. They have been distorted by two conditions. The first is the present shortage of supplies in industries such as steel and cement which are central in the change. As a result of this shortage, even before the basing point decisions various suppliers, unwilling to absorb the freight necessary to reach their more distant customers, were refusing to serve some of these customers if the entire output could be sold nearer home. Customers thus cut off by a distant supplier were often unable to turn to a nearby supplier because the entire capacity of the nearby mills was already committed to serve old customers. In spite of these conditions of shortage, suppliers were furnishing their products at prices often substantially lower than they could have realized. Had the basing point system been abandoned under more normal market conditions, the probability is that some customers would have turned from distant to nearby mills, that other customers would have been retained by their former suppliers through the use of various forms of freight absorption which did not involve the systematic matching of delivered prices of all competitors, and that prices at nonbase mills and in areas adjacent to these mills would have fallen.

Under existing circumstances, however, this kind of transition ran contrary to the interests of the suppliers. Compliance with the law has

been offered as an excuse for refusal to absorb any freight whatsoever, and thus delivered prices to those customers who before the basing point decisions were still being supplied by mills which absorbed freight have been substantialy increased. Although many mills had previously set prices high enough to permit net absorption of freight on their total volume of business, and although those which adopted rigid f.o.b. mill pricing were now rid of the cost of this net freight absorption, in various industries such mills did not reduce their mill prices when they made the change. Instead, some of them implied that higher prices and higher mill realizations were now required by law. Buyers adversely affected by such practices have been unable to turn to nearby mills because of the shortage. The effect upon the interests of various buyers resulting from this way of handling the situation has been incorrectly described as the inevitable effect of compliance with the law. Indeed, a substantial price increase in the steel industry, which spokesmen of the industry themselves said was not connected with the basing point decisions, has somehow become associated with these decisions in some quarters.

A second condition which has tended to reinforce the first has been the development of a vigorous campaign by certain respondents in the Commission's basing point cases to induce the Congress to amend the law. Of course these respondents, like all citizens, have the right to urge a change in the public policy of the United States at any time. But a request that the Congress abandon its time-honored policies against collusive price fixing and price discriminations which injure competition must necessarily encounter difficulties. The more extreme the application of the present law can be made to appear, the better is the chance for new legislation. The commercial self-interest in rigid f.o.b. mill pricing during this time of shortage, which I have described above, has been reinforced by political self-interest in making the law seem rigid, arbitrary, unreasonable, and highly inconvenient to buyers. I have heard of one case in which a seller refused to give his customer information as to the freight costs between mill and customer, claiming that to convey such information would be a violation of the FTC Act. Certain sellers of scarce materials have been urging their customers to join the campaign to get the law changed.

There is nothing but business policy to require these sellers—both those who are under orders by the Commission and those who are respondents in cases not yet decided—to adhere to a rigid f.o.b. mill pricing system. Neither is there anything in these orders by which individual sellers who act without collusion and without an industry-wide systematic matching of prices are prevented from absorbing freight in order to reach customers in the considerable number of instances

in which they can do so without illegally injuring competition. Similarly, nothing but business policy prevents sellers from reducing the level of their prices enough to offset the costs of freight absorption in so far as they no longer incur these costs. Nothing in the law requires an increase in the average mill net realization of the seller such as sellers have typically obtained in shifting from basing point systems to f.o.b. mill pricing systems.

Even the adoption of f.o.b. mill pricing has, however, not been as uniformly injurious to buyers' interests as has been alleged. Some buyers have reported that before the steel industry adopted f.o.b. mill pricing they were denied steel by their former suppliers, who were unwilling to absorb freight to serve them when the goods could be sold nearer home; but that after the f.o.b. mill pricing system was adopted, they were able to obtain steel from their old suppliers merely by paying the full freight cost of the shipment. According to economists for one business magazine who have made a study of the subject, the abandonment of freight absorption in the steel industry raised delivered prices on only about ten per cent of the industry's total volume, and half of the business affected was concentrated in Detroit. According to a vice president of the Federal Reserve Bank of Boston, who reported to the New England Council the results of a careful study of the effects of the basing point decisions upon New England, these effects were negligible unless the orders either required f.o.b. mill pricing or prevented individual concerns from systematically absorbing freight. If f.o.b. mill pricing were required, the effect, according to this study, would be to deprive New England of about 35,000 jobs and to create the more than offsetting opportunity for almost 50,000 additional jobs. The same study pointed out that the hardship to individual customers could be substantially reduced if suppliers were willing to exchange customers in cases in which the result would be to let each mill sell, and each customer buy, nearer home.

So much for the present confused and transitional situation. Now let us look at the long-run effect of the basing point decision upon the economy. In what follows, I shall make the assumption, in order to have a starting point for discussion, that the present confusion about the meaning of the law will disappear and that the present policy of the law will not be modified by the Congress.

The most obvious point is that in the future, as in the past, there will be a wide variety of geographic pricing methods in use by different companies and different industries. No particular method of pricing will be prescribed. Businessmen will be prevented from acting together to use geographic formulas as price-fixing devices, and they will be ordered to abandon particular geographic price relationships which injure com-

petition within the meaning of the statute. Except as these limits circumscribe their freedom, they will adopt such policies as they choose. Because of the diversity of their pricing practices, it is impossible to make charts and graphs which will show the types of industry structure and business behavior which these diverse practices will produce.

It is safe to say, however, that collusion will be more difficult than before, particularly in the heavy industries. Since collusion typically makes for relatively rigid prices and for a willingness to change output and employment rather than prices in response to a varying demand, it is to be expected that the price policies of the basing point industries will be less rigid than before. This is all the more probable, since it will be harder than before for competing enterprises to be sure that the buyer has nothing to gain price-wise by dealing with any of their rivals.

The changes in the structure and location of industry which can be predicted from the basing point decisions are only those that grow directly out of the abandonment of the basing point system and that do not depend upon the particular pricing practices which take the place of the basing point system. The most obvious change is that the consumer is likely to be given the benefit of water rates and trucking rates for the delivery of goods where these forms of transportation are available as a satisfactory substitute for rail freight rates. In the past, when water shipments were used, the consumer was typically charged the rail freight; and, since he was thus deprived of incentive to accept slower transportation by water, the barge lines have been underutilized. There are already evidences at Pittsburgh that shipments of steel by water are picking up. With a chance to save transportation cost in good locations along highways and navigable waters, it is probable that in buying raw material, fabricators will be tied less closely than before to the railway network. It is already evident that sellers of basic raw materials who must rely upon rail transportation to reach markets which their competitors can reach by water will bring pressure to bear upon the railroads in an endeavor to reduce the cost of rail shipment.

Transportation expense is also likely to be reduced by a decrease in the average length of shipments. Basing point systems encourage an extravagant interpenetration of markets, involving excessive cross-hauling and other unnecessary expenses of sale and delivery, by depriving buyers of any incentive to purchase from nearby mills rather than distant mills. Charles M. Schwab wrote in 1928:

> It is manifestly uneconomic for a steel manufacturer in Chicago to ship 100,000 tons of steel to Pittsburgh at a time when a Pittsburgh manufacturer is shipping a like quantity of like material from Pittsburgh to Chicago. . . .

It must not be assumed that all the cost of this crosshauling is borne by the producer. It is obvious to everyone that there is an economic waste in permitting the crosshauling to exist and it should be obvious that this waste is paid for jointly although perhaps indirectly by the consumer as well as the producer of steel products.

The Commission estimated in 1932 that unnecessary transportation in the cement industry cost slightly more than 24 cents a barrel, which was about 20 per cent of the total costs of producing and selling. I do not wish to be understood as saying that the abandonment of the basing point system will eliminate all such transportation. I believe that an appreciable amount of interpenetration of markets will continue; and so long as it expresses competition instead of collusive matching of delivered prices, I hope that it continues. However, once we get rid of the formulas which destroy the consumers' incentive to economize transportation, it is reasonable to suppose that the amount of crosshauling will be substantially reduced and the cost of distribution will decline correspondingly.

Moreover, there will no longer be an incentive for suppliers and consumers of industrial products to ignore some of the advantages of being near one another. Under the basing point system, it pays the large consumer of the industry's products to establish himself at the base rather than near a mill which is not at the base, since he thus obtains his supplies most cheaply. In the Pittsburgh-Plus case the Commission found that this had happened. On the other hand, it is advantageous to locate a new small supplying establishment near the edge of a basing point area for the sake of the phantom freight which can be charged in the adjacent territory. For example, the president of Laclede Steel Company testified in 1936 that his plant had been located in St. Louis because, "We had a wider margin of profit as we moved away from Pittsburgh." New capacity is attracted to the edge of the base area while the development of new consumption there is retarded. New consumption is attracted to the basing point instead. It does not pay a consumer to be near a supplying mill unless that mill is also a basing point. It pays a mill better to be near a consumer who is away from the base than to be near one who is at the base. Such perverse relationships will cease to distort the pattern of industrial location if basing point systems are abandoned.

The abandonment of basing point systems should also do something to strengthen small business enterprises against their larger rivals. In general, basing points have been located at the plants of the larger producers and the smaller producers have frequently been located at a considerable distance from basing points. Under these circumstances, the big producer at the base has been able to sell as profitably next

door to his smaller rivals as at his own mill door, because at any point up to the edge of the basing point area the formula has enabled the base mill to recover its freight expenses in full. The small nonbase producer, on the other hand, has been able to sell profitably to any customers in his own territory who did not buy from the big base mill, but has been handicapped in selling toward the base by the fact that, as his transportation expense increased, the delivered price and his mill net as prescribed by the basing point formula fell lower and lower. In other words, all markets in the basing point area have been open to the producer at the base, and there has been no obstacle to his growth; but the producer away from the base has been dependent upon local markets which he shared with the basing point producer and has been handicapped in selling into the home territory of that producer. Aggrandizement of the base mills and limitation of the size of the nonbase mills has been inherent in the pattern. If the basing point system is abandoned, there is a substantial possibility that the practices which replace it will give the small producers who are now located away from basing points a better chance to enlarge their volume, both by improving their relative competitive strength in their home markets and by diminishing the cost which they incur in selling toward the substantial home markets of their larger rivals.

The basing point decisions are landmarks in an effort to preserve a free market in the United States and to give the outlying communities of America a fair chance to participate in our country's economic development. These cases dealt with major industrial evils. The policy underlying them is concerned with similar problems. It need cause no difficulty for businessmen who do not fear price competition and who avoid discriminations which significantly injure competition among their customers.

TAXATION AND INFLATION CONTROL

By Louis Shere*

I shall attempt in this paper to indicate the limitations of taxation as an instrument of inflation control, and incidentally the limitations of some of the other control measures. I do not want to convey the impression of fatalistic acceptance of inflation. I know of no economic law which necessarily predetermines the outcome of the present situation. It lies within the power of the people and government of this nation to prevent further inflation. Inflation is, however, a complex, dynamic problem which can be attacked successfully only by a well-coordinated program. It will take all the skill at our command to achieve economic stability. With wise management we can achieve that stability, not so much by rolling back prices, but rather by preventing further increases while rolling forward an ever-expanding production. The potential gross national product of this country is increasing at the annual rate of about 3 per cent or $7 billion a year (in 1947 prices). Ultimately, high production will bring relief from high prices and high taxes as well. The immediate hope for inflation control rests, however, upon our capacity to put into effect a combination of strong credit and tax policies.

The foundation of the present inflation was built during the war. For nearly four years, billions of income were generated by war production which did not add to civilian supplies. Out of this situation was created the backlog of demand and the stockpile of liquid assets which are important factors in the current inflationary situation.

At present the production of goods and services is high, but effective demand is relatively higher both because of the backlog of needs and because income derived from current production is being supplemented by spending past savings and by drawing on vast reservoirs of credit. This excess of effective demand continues to be so large relative to the short-run capacity to produce that prices are under continual upward pressure.

The usual way to measure inflation is by the rise in prices. By the middle of 1948 the wholesale price index was more than 115 per cent higher than the average for 1939. About two-thirds of the increase in

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the index has occurred since the cessation of hostilities in September 1945. During the second half of 1947, wholesale prices increased at the annual rate of 21 per cent.[1] Prices declined somewhat in the first quarter of 1948, but in the second quarter they resumed their upward trend.

The spectacular rise in the gross national product from about $90 billion in 1939 to $232 billion in 1947, or 156 per cent, is due in considerable part to price increases. Consequently, to arrive at a reliable measure of the real growth in production, the gross national product figures must be adjusted for price changes. When this is done, it becomes clear that while inflation accounts for nearly two-thirds of the increase, we have nevertheless emerged from the war with a substantially higher level of production than we have ever achieved. In terms of the same price level, the gross national product increased 53 per cent from 1939 to 1947.[2] This increase in the gross national product, while achieved for the most part under war and extraordinary postwar conditions, is, I believe, an impressive demonstration of what this nation can accomplish.[3]

While most of the inflation has taken place since the termination of hostilities in 1945, the foundation for it, I repeat, was built during the war. If the economy had operated on a free competitive basis, prices would have risen with disastrous cumulative effects during the war period. Such an inflation would have been incompatible with the

[1] Consumer prices increased 73 per cent from 1939 to the middle of 1948. Almost 60 per cent of this rise followed the cessation of hostilities. During the second half of 1947, consumer prices increased at the annual rate of 13 per cent. Like wholesale prices, consumer prices decreased in the first quarter of 1948, but increased again in the second quarter.

It is questionable whether changes in the price indices give an accurate portrayal of the movement of prices in periods when many of the priced items are not generally available or are available only at black-market prices which do not get reflected in the indices. It may well be that the indices underrate the extent of the wartime inflation.

[2] *The Economic Report of the President,* January 1948, Table 11. More accurate comparisons of gross national product in constant prices may soon be available but will not affect the drift of the discussion. The problem of expressing gross national product in terms of constant dollars involves technical pitfalls with which technicians are currently struggling.

[3] In recent decades, productivity increased at the rate of approximately 2 per cent each year. Since 1939 this rate has been accelerated. In 1939, the civilian labor force averaged about 55 million; only 46 million, or 83.2 per cent, were employed. The gross national product per employed member of the labor force (in terms of first half of 1947 prices) was about $3,210. By 1947, the civilian labor force exceeded 60 million and employment averaged 58 million, or 96.4 per cent. The gross national product per employed member of the labor force (in terms of the same prices) was about $3,900. Thus, from 1939 to 1947 the labor force increased by an average of 625,000 annually, average unemployment decreased from 16.8 per cent to 3.6 per cent, and gross national product per employed member of the labor force increased at a compound average rate of 2.5 per cent per year. Even if the conservative prewar annual increases of 2 per cent in productivity and 600,000 of labor force are assumed, the potential gross national product will grow at the annual rate of about 3 per cent, or by $7 billion (in 1947 prices). Based on data in *The Economic Report of the President,* January 1948, Table 11, and Appendix Table VIII.

development and utilization of the full productive capacity of the nation. It would have been incompatible with our ideas of fair allocation of scarce goods and services to individual needs. It would have resulted in an intolerable financial cost.

During the war, numerous control measures had to be adopted to prevent the disrupting consequences of inflation. Taxation and savings programs teamed up effectively with direct controls in the national effort to achieve stabilization. Some credit controls were instituted but they served in a lesser capacity.

Direct controls played the leading role in the wartime stabilization program. They covered virtually every phase of the nation's economic life—prices, wages, manpower, raw materials, production, inventories, transportation, shipping, construction, exports and imports. Rationing and subsidies were employed to make a tolerably equitable distribution of the scarce goods and services available for civilian consumption. These direct controls did not long survive victory. On the day following Japan's surrender, the controls over manpower were dropped. Within a few weeks, many priority and production controls were abolished, price control was removed from several hundred items, restrictions on transportation and industrial construction were eased, and a large portion of export and import controls were lifted. By the end of 1945, rationing of all commodities except sugar had been lifted and most subsidies had been removed. Wage and price controls were gradually lifted during the first half of 1946 and, except for rent controls, were finally ended in November, 1946. By the beginning of 1947, nearly all the wartime direct controls had been removed.

Credit controls necessarily played a relatively minor part in containing the wartime inflation. Consumer credit was restricted by Regulation W which went into effect three months before Pearl Harbor, and stock margin requirements, which were kept at their prewar level of 40 per cent during most of the war, were raised in February, 1945, to 50 per cent and again in July, 1945, to 75 per cent. These limited credit restrictions were not lifted as quickly as the direct controls. Regulation W was terminated as of November 1947. Margin requirements were increased from 75 per cent to 100 per cent in January, 1946, but in February, 1947, were restored to the 75 per cent level.

In general, however, credit was eased rather than tightened during the war. Some of the reserve requirements of banks were relaxed to facilitate the financing of the war effort, and the government guaranteed almost 9,000 war production bank loans which resulted in making available to industry over $10 billion of credit.[4]

Taxation served the wartime stabilization program directly by

[4] Under Regulation V.

drastically curtailing the amount of income available for consumption and indirectly by lending important support to the control system. Profiteering was minimized by high income and excess-profits taxes. Without such profit control, it would not have been practicable to control wages, prices, and the allocation of materials.

Beginning with the enactment of the excess-profits tax in 1940, the federal tax system went through a series of significant adaptations to changing economic conditions. The excess-profits tax rate was increased three times until by the end of the war it was 85.5 per cent. In addition, profits from war contracts were made subject to renegotiation. The corporation income tax on normal profits was increased from 19 to 40 per cent. By 1945, receipts from corporate taxes were more than twelve and a half times the receipts in 1939.

Individual income taxes were also increased greatly. Exemptions were cut repeatedly. The starting rate on the first $2,000 of taxable income was increased from 4 per cent in 1939 to 23 per cent in 1944. Rates were pushed up all along the line, reaching a top of 94 per cent for taxable net incomes over $200,000, subject to a maximum effective rate limitation of 90 per cent. By 1945, receipts from individual income taxes were more than eighteen and a half times the receipts in 1939.

Most excise taxes were increased and new excises were introduced. Special excises were imposed on consumer durables to help conserve materials more urgently needed for war production and to bolster price controls or to capture for the government a part of the extraordinary profits from the sale of limited supplies where price controls were ineffective or did not exist. By fiscal year 1945, receipts from excise taxes were about three and a half times the receipts in the fiscal year 1939.

The entire federal revenue system was greatly strengthened throughout the defense and war years. At the peak of its productivity, in the fiscal year 1945, net budget receipts amounted to $46.5 billion, or nine times the receipts in fiscal year 1939. Taxes were reduced appreciably by the Revenue Acts of 1945 and 1948 but receipts for fiscal year 1949 are still estimated at $40.7 billion or almost 8 times as much as in 1939.[5]

During the four war years, 1942-1945, receipts amounted to $126 billion or 41 per cent of federal expenditures. Still some believe that the current inflationary problem could have been largely avoided if

[5] A large part of the increase in receipts is of course due to the increase in the gross national product, but that the federal revenue system had been greatly strengthened during the war is evident from the relationship between federal receipts and gross national product. Federal receipts in calendar year 1945 were estimated at 20 per cent of gross national product as against 7.5 per cent in 1939. In 1947, the per cent was 19.

only stronger tax measures had been adopted. In 1943, for example, many private and government economists advised the Administration to ask for tax increases ranging all the way up to $30 billion. When the Administration recommended that the Congress enact a $10.5 billion increase in tax revenue, the response was an increase of less than $2 billion. While I do not agree that it would have been either desirable or practicable to attempt to impose taxes high enough to have prevented inflation, I believe, nevertheless, that those who toiled at measuring the inflationary gap did not toil in vain. They illuminated the danger signals and perhaps without their persistent urging for the imposition of higher taxes to close the gap, the federal wartime tax system would have been weaker.

Throughout the war a vigorously promoted savings bond program supported the attack on inflation. Approximately $55 billion of Series E, F, and G savings bonds were sold from May 1, 1941 through January 2, 1946, the end of the Victory Loan. In the same period, redemptions amounted to $10 billion.

The war loans were voluntary. The field of compulsory loans, an important area between voluntary loans and taxes, was allowed to remain fallow during the war years. Some felt that compulsory lending would have immobilized spending power as effectively as taxes, would have been more equitable, and also would have protected work incentives better than taxes, because workers would have been deprived of the fruits of their labor only temporarily. Advocates of compulsory lending pointed out also that the government could control the timing and speed of the release of compulsory loans more effectively than in the case of voluntary loans. Despite distinguished support, compulsory loans played almost no part in the war finance of this country.[8]

It may be that neither tax nor savings loans were set high enough during the war. Critics of wartime fiscal policy sometimes fail to realize, however, that war requires a top priority for production. Financial incentives are necessary even in war to obtain the maximum output of goods and services. No nation has ever run the risk of slackening production in wartime by undertaking to impose taxes or

[8] In 1942, the Treasury recommended a spendings tax which was rejected by the Congress. The tax consisted of two parts, a flat rate tax plus a graduated surtax. The flat rate tax of 10 per cent was applicable to spendings in excess of $500, for a single person, $1000 for a married couple and $250 for each dependent. The surtax was to be levied at graduated rates ranging from 10 to 75 per cent on spending in excess of exemptions, which were twice as high as those under the flat rate tax. The flat rate tax was in the nature of a compulsory loan. It was estimated that the two parts of the tax would draw into the Treasury "6½ billion dollars otherwise available for consumer spending. But of this total some $4½ billions, although raised as a tax, will be treated not as revenue but as a debt to the individual from whom it was collected, to be repaid after the war." *Annual Report of the Secretary of the Treasury for the Fiscal Year Ended June 30, 1943*, pp. 410-20.

forced loans sufficiently high to close the estimated inflationary gap.

The failure to close the inflationary gap by imposing higher taxes during the war and transition years has resulted in the accumulation of unprecedented amounts of liquid assets in the hands of individuals and corporations and large holdings of government securities by banks and other financial institutions.

In the seven-year period beginning January 1, 1941 and ending December 31, 1947, liquid assets of nonbank investors rose from $93 billion to $322 billion, an increase of $229 billion.[7] The federal deficit was the principal source of growth in these liquid assets, accounting for $206 billion, and commercial bank loans and investments were next in importance, accounting for $21 billion of the increase.[8]

Bank participation in financing the federal deficit made a revolutionary change in the banking and monetary systems. The banks absorbed $51 billion of federal securities during this seven-year period, and the Federal Reserve Banks absorbed another $20 billion.

On January 1, 1941, currency outside banks was $7 billion, demand deposits $35 billion, and time deposits $28 billion. At the close of the seven-year period ending December 31, 1947, currency outside the banks amounted to $26 billion, demand deposits $87 billion, and time deposits $56 billion.[9]

The relatively small amount of excess reserves at the present time superficially indicates limited potentialities for further credit ex-

[7] These estimates were prepared by the Office of the Technical Staff, Treasury Department. The concept used here differs from Federal Reserve estimates of holdings of liquid assets by individuals and businesses by (1) inclusion of holdings of governmental accounts, insurance companies, mutual savings banks, savings and loan associations, foreigners, and nonprofit institutions; (2) exclusion of savings deposited in mutual savings banks and Postal Savings (since they are also nonbank investors); and (3) statement of deposit figures on basis of bank records rather than holder records.

It is estimated that these assets amounted to $315 billion by the end of May, 1948.

[8] Other items entering into the determination of the liquid asset figures accounted for the remaining $2 billion increase.

[9] Member banks alone had demand deposits of $30 billion, time deposits of $12 billion and reserves of $14 billion on January 1, 1941 as against demand deposits of $74 billion, time deposits of $28 billion and reserves of $18 billion on December 31, 1947.

The base for the credit supply was affected by a number of factors, the major one being the $20.3 billion increase in Federal Reserve Bank holdings of federal securities which made for a corresponding increase in bank reserves. A net inflow of $0.8 billion of gold also contributed toward an increase in bank reserves. Meanwhile, however, money in circulation increased $20.1 billion. This tended to draw down bank reserves and to offset the increase in Federal Reserve bank holdings of government securities. The net result of these and other factors affecting the credit base was to increase member bank reserves by $3.9 billion. The wartime deposit expansion was made possible by this increase in reserves and the utilization of pre-existing excess reserves to the extent of $5.1 billion. Excess reserves which amounted to $6.6 billion on January 1, 1941 were reduced to about $1.5 billion by December 31, 1947.

pansion. However, it has been pointed out that if, for example, the commercial banks were to sell half of their federal security holdings and the Federal Reserve System were to buy them (to provide an ultimate market), the member banks would acquire enough additional reserves to expand credit (at the ratio of 6:1) by about $210 billion. This is nearly double the present money supply consisting of demand deposits and currency.[10]

The importance of the money and credit factor in the problem of inflation control has also been pointed up by relating the money supply to gross national product. The total of adjusted demand deposits and currency outside banks was $113.6 billion at the end of 1947. The ratio of the nation's total money supply to the annual rate of gross national production in the last quarter of 1947 was about 47 per cent as against 38 per cent at the end of 1939. Thus, if the rate of money turnover in financing gross national production increased to its 1939 level, and the 1939 relationship between money and production were restored, the gross national product would be inflated by 23 per cent.

I have given these startling figures on liquid assets, money, and credit to bring home the point that inflation is a complex problem which manifests itself in different economic fields and that it probably cannot be contained by single measures, such as a "wise" tax policy. To control inflation, the excess of money and credit must be controlled or else the excess will be more or less eliminated by price increases.

While money and credit are important factors in the problem of controlling inflation and some have overemphasized them, others have placed almost exclusive emphasis on production. They hold that the inflationary situation would subside if production were stepped up sufficiently. Under conditions, such as the present, however, where practically the entire labor force and all available plant capacity and materials are being fully utilized, there is little real opportunity in the short run to increase production significantly. It is true that production can presently be increased or channelized to advantage by better allocation of the scarce materials and labor. To these and other ends, the President has recommended to the Congress that selective controls be provided for dealing with the distribution of basic materials.[11] But while these measures can increase production somewhat by more effectively deploying limited resources, they cannot

[10] Statement of Mr. Marriner S. Eccles, Chairman of the Board of Governors of the Federal Reserve System, November 25, 1947, *Hearings before the Joint Committee on the Economic Report, 80th Cong., 1st Sess.*, on *Anti-Inflation Program, As Recommended by the President's Message of November 17, 1947*, p. 140.

[11] *Midyear Economic Report of the President,* July, 1948, p. 7.

increase total production fast enough to provide an immediate or short-run cure for inflation.

In the short run, it is unrealistic to expect great increases in output over the whole field of industry. Moreover, additional production by means of longer hours or a larger labor force or more capital investment creates spendable income. It tends to increase demand as well as the supply of goods and services. Increased production of consumers goods may alleviate relative scarcities, but in circumstances where the over-all supply is relatively short in terms of basic needs and effective demand, the retarding effect of the increase in production on prices is at least partially offset by the additional flow of spendable income created in the production process. Increased production of capital goods creates spendable income without any immediate increase in goods available for consumption and thus in the short run is inflationary.

It is always a critical economic problem to maintain a proper balance between production of capital goods and consumption goods. In the present inflationary situation the problem becomes extremely difficult since each step in the direction of enlarging productive capacity aggravates the current inflation. The measures to control inflation and those specifically designed to retard current capital expenditures in the interest of controlling prices must be such as would not permanently interfere with the growth in our productive capacity. To achieve economic stabilization we must ultimately rely upon greater plant capacity and an ever-increasing volume of production.

We may already have traveled a substantial piece along the road towards a stabilization goal, but there is no certainty that it will be reached by mere inaction or random fiscal policy. Inflationary pressures still constitute a dangerous and disturbing threat to full realization of this nation's economic potentialities in the immediate future. The immediate need is still to decrease the aggregate expenditures of government, business, and individuals.

Such are the requirements for inflation control. But private expenditures have been increasing and the federal government is finding it increasingly difficult to reduce its expenditures to levels which only a few brief years ago were fondly anticipated by everyone. We can all recall the days when it was the mark of an incurable expansionist to assume a postwar federal budget of $30 billion. Yet the estimated federal expenditures for the fiscal year 1949 are more than $12 billion higher, $42.2 billion, and in August, 1948, the President indicated that to bring our armed forces to proper strength and for various other specified reasons, additional expenditures will be required for the fiscal year 1950. These new programs will increase federal expenditures by perhaps another $2 billion or to a total of over $44 billion.

It is becoming increasingly clear that despite the most stringent efforts toward economy, any realistic hopes for stabilized and curtailed federal expenditures are ultimately tied to the achievement of greater stability in the international situation.

Private expenditures are also increasing.

Business has been making capital outlays at an unusually high rate. Under inflationary conditions, the immediate impact of an increase in business capital expenditures is to stimulate inflation. The expenditures compete for scarce materials and the incomes generated in the process of capital formation press against scarce and lagging supplies of consumer goods.

In 1947, gross private domestic investment amounted to 30 billion or 13 per cent of gross national product. This compares with an average of 11.5 per cent in the period from 1919 to 1941. Loans by commercial banks, chiefly to incorporated and unincorporated business, increased about $7 billion in 1947. Corporations raised $4.3 billion new money from security issues in 1947. These financial data all point to a high level of business expenditures.

Increases in corporate profits have helped to push the inflation along. Corporate profits after taxes have grown from $5.0 billion in 1939 to $8.7 billion in 1945 and have more than doubled again, amounting to $18.1 billion in 1947. These large profits after taxes have permitted payment of record amounts of dividends and have also left large sums available to be plowed back into capital expansion. Dividends have increased from $3.8 billion in 1939 to $4.7 billion in 1945 and to $6.9 billion in 1947. Undistributed corporate profits have increased from $1.2 billion in 1939 to $4.0 billion in 1945, and $11.2 billion in 1947. Total retained corporate profits for the nine years, 1939-1947, amounted to over $48 billion, and have constituted the major source of corporate funds available to finance capital expenditures. Corporate accumulation of cash on hand and in banks and holdings of federal securities were estimated at $43 billion at the end of 1945 and $35 billion at the end of 1947.

The fact that business profits have been high during the past several years has led some to the conclusion, retrospectively, that it would be easier now to contain the inflation if the taxes on business had been higher throughout the war and transition years. They appear to strike with telling force at the wisdom of the 1945 repeal of the excess-profits tax. The course of action seemed less clear, however, in 1945 when the emphasis everywhere was on the need to strengthen the financial reserves of business to accomplish a speedy reconversion of the economy from war to peace production. In 1945 it was extremely difficult to forecast economic developments, but the situation in 1948

would seem to be more predictable. The outlook is for continued inflation. So long as inflationary forces continue, profits will be inflated and it would serve the requirements of both equity and stabilization to tax such inflated profits at relatively high rates.

Individuals are also expanding their expenditures. Personal consumption expenditures increased by $17 billion in 1947 while disposable income of individuals increased by only $14 billion. Personal consumption expenditures are by far the most important part of the total expenditures for goods and services. In 1947, for example, these expenditures accounted for 71 per cent of the gross national expenditure. Clearly, the control of inflation in large part resolves itself into the problem of containing consumer expenditures. Recent data show that individuals have reduced their wartime rate of savings. Personal savings have decreased from the wartime peak of $34 billion in 1944 to $9 billion in 1947. Individuals saved 21 per cent of disposable income in the period 1942-1945 as compared with 7 per cent in 1946 and 5 per cent in 1947.

The tendencies on the part of business and of individuals to spend beyond the limits of current income must be reversed if the inflation is to be curtailed. They can be dampened to some extent by voluntary means. But if we are to combat inflation successfully, we must rely heavily upon a restricted federal fiscal policy which is properly coordinated with monetary policy. The problem of curtailing expenditures in the private sector of the economy is complicated by the fact that current expenditures of business and individuals are partly determined by their capital and credit resources as well as by the amount of their current incomes. It is extremely difficult to curtail private expenditures if individuals and businesses can draw on accumulated liquid assets and credit to supplement their current income.

In the circumstances which confront this nation, the government must realize a large surplus if economic stability is to be attained. Yet the recently enacted tax reduction comes at the very time when the Congress is simultaneously and inevitably increasing federal expenditures. One is perhaps justified in viewing this peculiar scissor action with puzzling concern.

In the fiscal year 1947 the federal government realized its first budgetary surplus in 17 years, although it amounted to only $754 million. The surplus increased to an unprecedented $8.4 billion in the fiscal year 1948.[12] In January of this year the fiscal outlook promised continued powerful support to the government's stabilization program. It was estimated that the budgetary surplus for fiscal year 1949 would be $4.8 billion and the cash surplus over $7 billion. Now,

[12] Before the adjustment for the Foreign Economic Cooperation Trust Fund.

as the result of new expenditure programs and the recently enacted tax reductions, the budgetary surplus for fiscal year 1949 has been converted to a deficit of $1.5 billion[12] and the cash surplus has been reduced to $1.4 billion.[13] Our ammunition has, indeed, been dangerously depleted at the very time when the battle against inflation threatens again to become critical.

A government surplus of receipts over expenditures can effectively influence aggregate expenditures of the entire economy. The over-all effectiveness of a budgetary surplus in combating inflation depends to an important degree, however, on how well money and credit policies are coordinated in the attack. The existence of a cash surplus indicates that the inflationary effects of the government's expenditures are more than counterbalanced by the deflationary effects of the government's receipts. However, the net inflationary impact upon the private sector of the economy also depends on the use made of the surplus.

Where the proceeds of the surplus are used to retire bonds held by nonbank investors, the money supply is not directly affected, since the money collected from taxpayers is returned to bond investors. If the proceeds of the surplus are used to retire debt held by the commercial banking system, bank deposits are cancelled in payment of the bonds. Thus, the money supply is curtailed, but the reserve position of the banks is eased.

While the retirement of bank-held debt which reduces bank deposits is generally considered more deflationary than the retirement of debt held by the nonbanking public, this superiority depends on the rate of turnover of the deposits which are extinguished. Low velocity bank deposits are not greatly different from government securities in that both are regarded by the owners as reserves of purchasing power. That is, both represent liquid assets which may be tapped for spending. Both exert an indirect inflationary influence by encouraging spending and investment out of current income or other available funds, including borrowed funds.

The most deflationary method of using a government surplus is either to accumulate Treasury balances with the Federal Reserve Banks or to retire government securities held by the Federal Reserve Banks since either method will decrease the reserves of member banks. Under present reserve requirements, each dollar reduction in member bank reserves tends to result in a six-fold restriction of demand deposits. Clearly, if a large budgetary surplus extinguishes Federal Reserve credit or reduces member banks' reserves at a faster rate than is desirable, it must be offset by Federal Reserve Bank open-

[13] These estimates assume personal incomes of $212 billion. No allowance is made for any increase in receipts and expenditures which might result from additional inflation.

market purchases. A government surplus must be wisely managed and coordinated with credit policies; otherwise it can either lose much of its potential effectiveness as an anti-inflationary force or, at the other extreme, become a dangerously overly effective deflationary force.

As I have indicated, the effectiveness of taxation as an inflation control device is largely contingent upon its coordination with monetary and direct controls. As the direct wartime controls were lifted, taxation moved up from an auxiliary position to the front-line attack on inflation. Under the war economy, main reliance was placed on such direct stabilization measures as wage and price controls, rationing, allocation of scarce materials, and consumer credit restrictions. Taxes were increased to meet as large a part as practicable of the war expenditures and were adjusted to buttress and supplement the other controls. However, the adjustments in the federal tax system did not constitute the primary elements in the over-all stabilization program.

This was proved by our postwar experience. When the direct controls and the excess-profits tax were lifted, inflation began to move. The termination of consumer credit restrictions in November, 1947, further weakened the barriers against inflation. The federal tax system became the primary bulwark in the way of inflation. The recent reduction, however, has weakened the tax system and it is recognized that if inflation is to be controlled, it may become necessary to restore it to something like its wartime strength. But even a stronger revenue system than we now have may prove inadequate unless supported by other stabilization measures, some of which played an important role during the war. Important support must come also from a source which did not play a significant role in the wartime stabilization program. It must come from a carefully coordinated, restrictive credit policy, including tighter commercial credit, consumer credit controls, less credit support in the building trades and possibly also in the commodity and security markets.

The use of taxation for inflation control would accomplish little if the government surplus were counteracted by a rising and more active use of credit throughout the economy. For example, during 1947 the effect of the federal budget surplus was more than cancelled by an expansion of credit. In addition to the expansion of bank loans, the total amount of consumer credit outstanding increased in 1947 from \$10.2 billion to \$13.4 billion, a net increase of \$3.2 billion as compared with a maximum annual increase of less than \$1.5 billion from 1929 to 1941.

Some go so far as to maintain that the inflation control problem

is primarily not a fiscal problem; they inveigh also against direct controls or any governmental interference with the evolution of a free competitive economy. They hold that the whole of the inflation control problem can be satisfactorily disposed of by proper control of bank credit.

The proponents of a tough credit policy hurdle in stride a few important obstacles. The first is that financial institutions and the public hold very large amounts of the federal government's obligations. These obligations were issued at low interest rates and would decline sharply if credit conditions were appreciably tightened by open market operations, changes in reserve requirements or shifts in government balances from member banks to the Federal Reserve Banks. A decline in the price of the federal government securities to below par might shock the public confidence and might seriously embarrass many banks, insurance companies, and other financial institutions. A severe curtailment of bank credit could readily induce a full-fledged depression. General credit control measures are most effective if employed in anticipation of rather than in pursuit of inflation. Once inflation is well under way and credit is being employed to a substantial extent to meet high business financial requirements, it becomes well-nigh impossible quickly to cut off the supply of credit without jeopardizing the economy. While a sharp cutback of credit is no longer practicable, it is nevertheless desirable to watch that the credit reins be kept as tight as practicable.

Even if credit policy were properly coordinated with tax policy, taxation would have limitations for the purpose of controlling inflation. While taxation is broadly effective as an inflation control device, it is most effective when it presses hardest against expenditures of the low-income groups which account for most expenditures. That is precisely why it is not feasible to go all out in the use of taxation for the purpose of controlling inflation. Certain tax adjustments would make the tax system more effective for the purposes of inflation control, but they would at the same time make it shocking to accepted concepts of equity. For example, consumption expenditures can be discouraged and savings encouraged by imposing higher excise taxes, taxing distributions of corporate profits, lowering income-tax exemptions, and increasing the rates at the bottom of the income scale. The resulting distribution of tax burdens may most effectively curb spending but it would not appeal to most persons as a reasonable approach to the inflation control problem.

Once an inflation has developed considerable momentum, broad social, political and equity considerations impose important limitations on taxation as an inflation control measure. Under such conditions

the inflation has already made heavy inroads on the purchasing power of the low-income recipients and the effects are likely to be undesirable if additional tax burdens are heaped upon inflation burdens to further depress already modest living standards. To attempt to achieve an equivalent aggregate reduction in expenditures of the middle- and upper-income groups in order to hold the aggregate expenditures of individuals to stabilized amounts would, if at all possible, entail near-confiscatory taxes.

There also are definite limits to the use of business taxes for the purpose of achieving economic stabilization. The concerns that are financially soundest have better access to both the capital markets and bank credit. Efforts to curtail business expenditures by imposing high taxes may be nullified by those that have easy access to credit, but might curb equally essential but new and financially weaker concerns.

Taxation also has limitations as an inflation control device in the area of administered prices. It is generally recognized that many important industries have pursued such pricing policies with moderation and restraint. Where such price conditions prevail, tax increases may, however, be made the occasion for increasing prices closer to their current market potentialities. Similarly, some wage contracts may be affected by tax considerations, so that increases in individual income taxes may induce higher wage demands.

All these limitations upon the use of taxation as an inflation control device, though important, do not warrant the conclusion that an easy tax policy is the surest way to stable prices. On the contrary, I believe that the preceding analysis has demonstrated the immediate need for a substantial government surplus. This means that the tax system must be kept strong and strengthened if prices should continue to edge forward. The purchasing power of the people must not be permitted to be dissipated into inflation without benefit either to the public or the government.

THE BURDEN OF IMPORT DUTIES: A COMMENT

By Alfred E. Kahn*

In two challenging articles published in recent issues of the *American Economic Review,*[1] Professor Earl R. Rolph has reached some extremely interesting conclusions concerning the incidence of import duties. It is his thesis

> that the burden of import duties *always* rests upon a certain economic segment of the country levying the import duties and *not upon foreigners,* and second that this segment is *not* the consumers of taxed imports. It is, on the contrary, those who own resources, both human and non-human, in the export industries and those who own resources competitive with resources located in export industries. These people bear the tax in the form of a reduction in their money incomes in a fashion analogous to a partial proportional income tax (with no exemptions) collected at the source. They must sacrifice money income equal to the yield of the tax to the Treasury (p. 790).

This unequivocal statement (the stresses are the author's) contradicts certain apparently universally accepted ideas,[2] and deserves careful examination.

Professor Rolph does not deny that import duties may result in (a) a shift in terms of trade to the advantage of the country levying the tax (P) and to the disadvantage of the exporting country (E), and/or (b) lower income for foreign exporters, and/or (c) a higher domestic price of imported products. He does, however, deny emphatically that even in these cases E's consumers, E's exporters, or P's consumers, respectively, may properly be said to be paying the tax. These changes, he states, are only incidental effects, secondary consequences of the levy, and do not represent its incidence. In all cases it will be the factors of production in P's export industries, and others with which these factors may come into competition if they respond to the reduced income by shifting into other lines of production, that will suffer a loss of income because of, and exactly equivalent to,[3] the net tax receipts of P's treasury.

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[1] "The Burden of Import Duties," Vol. XXXVI, No. 5 (Dec., 1946), pp. 778-812; "The Burden of Import Duties with Fixed Exchange Rates," Vol. XXXVII, No. 4 (Sept., 1947), pp. 604-32. Page references, interspersed throughout the text, above, are to these articles.

[2] The reader is referred to the various citations in Rolph's articles.

[3] In certain circumstances, their total loss of income may be greater than the tax col-

This is not simply a terminological quarrel about the meaning of "incidence," though Professor Rolph is sometimes forced, in defending his thesis, to use the term in a fashion that seems to me absurd.[4] If it is true, as he maintains, that P exporters (and their domestic competitors) must always lose the dollars (assuming this to be P's currency) which P's Treasury gains, and that the latter's customs revenues come entirely from the exporters, the accepted theories certainly require substantial amendment, if not abandonment.

No summary can do justice to Professor Rolph's thought-provoking, meticulous exposition, but the major argument is simple and readily summarized. In so doing, it is necessary to distinguish the two major situations of freely fluctuating and fixed exchange rates, as he does, beginning with the former. Assume the Marshallian example of only two countries in the world, the United States and Britain, their international transactions consisting only of trade of $5 million of American cotton for £1 million of British whiskey, American and British exporters exchanging their foreign exchange receipts at the equilibrium rate of $5 to the pound. If the United States imposes a 20 per cent *ad valorem* import duty on whiskey, British exporters will suffer no direct injury. Even if their net dollar revenues fall from 5 million to 4 million they will find their pound proceeds unchanged at 1 million: the rate of exchange will simply adjust to 4 to 1, mirroring the diminished offer of dollars for pounds. They will therefore have no incentive to raise their dollar prices, or to ship less whiskey to the United States. Therefore, neither British exporters nor U.S. whiskey consumers pay the tax. It is the American cotton exporters, turning in their £1 million proceeds, who find they have lost $1 million—the very dollars which the U. S. Treasury has collected. They can shift some of this loss, if they are mobile, only by turning to production for the domestic market, where (assuming no change in national money income) the resultant increased supply reduces prices and hence the remuneration of competitive factors of production.

The ensuing reduction in the supply of cotton for export may then have the indirect effects mentioned above: (a) an improvement of American terms of trade *vis a vis* Britain, (b) a decline in the pound income of British whiskey exporters,[5] and hence, as British factors

lections. This additional income loss, however, like the loss of income of E exporters, or the deterioration in E's terms of trade, is balanced by equivalent gains elsewhere rather than by P Treasury receipts, and is simply another possible indirect consequence of the duty (pp. 804-5).

[4] See pp. 864-65 below.

[5] If British demand for American cotton has more than unit elasticity, the rise in the price of cotton will cause total pound revenues of American exporters to decline. This will come out of the pockets of British exporters when they turn their dollar revenues in to the foreign exchange market against a reduced supply of pounds.

of production move out of whiskey production for export, (c) a rise of the dollar price of whiskey. None of these represents incidence of the duty, for that is already entirely accounted for.[6]

The basis for this argument is the truism that the dollar income of American exporters, resulting from conversion of their pound receipts, is the dollar income of British sellers in the American market. If there is no reason for British exporters to resist paying the entire tax—and there will be no reason under the assumed conditions, any reduction of dollar revenues simply resulting in a proportionate rise in the pound value of each dollar—the entire tax will come out of their dollar receipts and will hence be directly withheld from American exporters.

Professor Rolph does not confine his conclusions to the case of a single British source of dollars, or a uniform, *ad valorem* tax on all sources. As we have seen, he says "the burden of import duties *always* rests . . ." and the stress is his. I propose to discuss the validity of his argument first under the more realistic assumptions of multi-commodity trade, with selective treatment of imports, returning later to the case of uniform treatment.[7]

Unfortunately, Professor Rolph's attempt to demonstrate that his thesis applies equally to the more complex situation is brief, and only suggestive (pp. 808-9). Differential tariffs will alter the composition of U.S. imports, he says, thus inferentially recognizing the virtual certainty of a direct increase in the price of commodities subject to relatively heavy duty. For, clearly, with many commodities traded, and many other sources of dollars in Britain than merchandise exports, an import duty on one British export (or, indeed, on all British sources of dollars except one), resulting in reduced dollar revenues for particular British exporters, will not result in a fully compensatory alteration in the exchange rate. The whiskey exporters, in this case, will either demand higher dollar prices or shift into other lines of production, thus reducing the supply of whiskey for export, with the same effect.

Rolph apparently believes, however, that the resultant injury to American consumers of certain, heavily taxed foreign products will

[6] Rolph offers two other reasons for refusing to consider these effects "incidence" of the duty. (1) There is no way, he says, for money payments from British exporters or consumers to reach the U. S. Treasury. (2) These gains and losses offset each other. Any possible deterioration in Britain's terms of trade represents a corresponding gain for U. S. consumers, not for the U. S. Treasury. Similarly, any injury to British exporters, I presume he would say, is matched by the increased revenues of British factors producing for the domestic market. This follows because the decline in income of British exporters is the result of, and exactly equivalent to, the decline of total British expenditures for U. S. cotton, which frees funds for expenditure on domestic goods and services.

[7] See pp. 862-63 below.

be precisely offset by equivalent benefits to consumers of other imports, less heavily taxed. It is presumably on this basis that he maintains that U.S. consumers still do not bear the tax. As for foreign exporters: "differential rates take foreign exchange from foreign producers of items subject to high rates and give an equal sum to the foreign producers of commodities subject to low duties." Thus, one infers, he is arguing that foreign exporters *as a group* still find their dollar receipts reduced by the full amount of tax collections, yet still, suffering no loss in terms of their own currency, have no incentive to curtail supply: hence, it will still be the American exporters who bear the entire loss.

Doubtless, a non-uniform American tariff will ordinarily bring benefits to certain American consumers, benefits which may, in a sense, compensate for the injury to others. However, I seriously question the possibility of demonstrating that the gains—either real or monetary—precisely offset the losses. The presumption is that in real terms they will not; and one might readily visualize a situation where they could not in monetary terms either.[8] I question also whether such indirect benefits of a tax to certain consumers justify the conclusion that other consumers are not bearing the burden, if they admittedly have to pay higher prices as a direct consequence of the tax. If American consumers of whiskey, whatever the elasticity of their demand, have to pay more dollars than they would previously have had to pay for the amount of product they now enjoy, these additional dollars going to the U. S. Treasury, they are certainly bearing part of the burden of the tax. Moreover, these compensatory gains of other American consumers represent a tendency toward improvement in U.S. terms of trade. Neo-classical economists have long ago demonstrated this to be a means of imposing part of the burden of a tax on foreigners; but Rolph considers such changes irrelevant to the problem of incidence.[9]

Moreover, I see no reason why this compensatory effect will so

[8] Assume, for example, that Britain exports two commodities to the United States, whiskey and woollens, receiving $5 million from each, that whiskey alone is subjected to a 20 per cent duty, and that the American demand for British whiskey is, within the relevant price range, completely inelastic. In this event, the price of whiskey can rise by the full amount of the tax, British dollar receipts need never fall, and the exchange rate never change. American consumers therefore enjoy no compensatory fall in the dollar price of British woollens, and American whiskey consumers pay the entire tax—the familiar conclusion of partial equilibrium analysis, under these assumptions.

[9] If, in the illustration of footnote 8, above, American demand for whiskey is not completely inelastic, net dollar revenues of British whiskey exporters will decline compared with the pre-tax level, the pound will depreciate in terms of the dollar, and Americans will therefore obtain British woollens at a lower dollar price. This, I presume, is the compensatory benefit which Rolph alleges. This change in the woollens market is an improvement in American terms of trade: Americans are by this change obtaining a larger quantity of foreign goods than before, for a given quantity of exports.

operate that American import duties of varying weights will on balance invariably take away dollar revenues from foreign producers precisely equivalent to the money yield of the tax.[10] Certainly Rolph nowhere demonstrates that this is so. If it is not necessarily so, American exporters need not lose dollars precisely equivalent to the tax.

However, it is clearly possible for American exporters to suffer such a loss. Elasticity of American demand for various imports may certainly be such that total dollar expenditures for them, including tax, may remain the same, or decline, as a result of differential tariffs. Following Rolph, then, net dollar revenues of British exporters may therefore fall by the full amount of the tax, or more, and American exporters may therefore find their revenues correspondingly reduced on converting their pounds into dollars. How can it be almost *inevitable* that certain American consumers bear part of the tax in the form of higher prices,[11] while it remains quite *possible* for American exporters at the same time to bear the entire burden?

The suspicion arises that it is inappropriate to regard any such loss of income on the part of American exporters as incidence of the tax. The levy of increased income taxes will undoubtedly result in decreased income in certain consumption goods industries. If the tax proceeds are not spent,[12] this decrease of earnings will not be compensated by corresponding gains elsewhere; the industries originally affected, therefore, will be incapable of recouping their losses except by forcing them partially on others. However, it is not customary, and correctly so, to say that these industries are bearing the tax, or that the original taxpayer has in this case successfully shifted the burden by not spending what the government has taken away! On the contrary, since tax receipts are ordinarily spent (and since there is no reason, *a priori,* to assume that governments ordinarily permit the process of taxing and spending to have deflationary consequences), these secondary effects will offset each other: some factors of production will lose, others gain, and, with complete mobility of resources, none need lose or gain—except the original taxpayer.

[10] It will not do so under the conditions postulated in footnote 8, above. Indeed, as long as American demand for the imports singled out for taxation is less elastic than for other imports, British dollar receipts need not fall by the entire amount of tax collections. This may leave American consumers with less to spend on other products, but provides no basis for the supposition that the outcome will be a precisely equivalent reduction of dollar expenditures on British goods.

[11] Not to mention the possibility that certain British exporters may also suffer a decline in *pound* income. However, it is true that, with flexible exchange rates, British exporters *as a group* cannot lose pound revenues, except as a result of the process outlined by Rolph. See footnote 5, above.

[12] Or, if, even though spent, the net effect of the taxation-expenditure is deflationary. See Otto von Mering, *The Shifting and Incidence of Taxation* (Philadelphia, 1942), pp. 138-41.

The loss of income by American exporters in Professor Rolph's argument seems similar to these secondary effects of an income tax. It is a result of the reduction in dollar earnings of British exporters, caused by the tax. Moreover, it need only be temporary. Since the American government presumably spends the tax proceeds, the reduced earnings of American export industries may be balanced by increased earnings elsewhere. To the extent that productive factors in those export industries are mobile, they may avoid all loss, thus, without forcing any losses on others.

Professor Rolph would protest consideration of government expenditure of the tax proceeds (pp. 809-12). He argues that it is necessary to consider, first and separately, who pays the tax, and this is his present concern. Although I would be inclined to agree that one need not, in a discussion of tax incidence, consider *how* the government spends the tax proceeds, I insist that in a discussion of the incidental effects of a tax, as here, it is misleading to refuse to consider *whether* it does so.

When Professor Rolph states categorically that American exporters will suffer a loss of dollar income, which they will be unable to escape except by shifting the burden to others, he is not merely refusing to consider the expenditure of the proceeds; he is instead really assuming that the tax revenues are *not* spent! True, there is no simple causal connection between the level of taxes and of expenditures: governments do not spend because they tax. But it is certainly even more unrealistic, in a general theory of incidence, to assume that governments consistently hoard tax receipts. If the U. S. government ordinarily spends the proceeds of its import duties, or transfers them to others (whether Army veterans, or taxpayers whose taxes would be higher but for the customs revenues, or bondholders whom the government pays off with these funds) who will spend them, neither American exporters nor their competitors need suffer any loss, reduced dollar earnings from exports being matched by increased earnings from domestic sales.[13]

If the foregoing argument is correct, Professor Rolph's conclusions

[13] Of course the government may hoard tax receipts, or transfer them to others who will. In this event, U. S. exporters will be unable to transfer to other lines without depressing the general price and (money) income level. Again assuming mobility and full employment, however, they should suffer no loss of real income. The real loss falls on the consumers of the taxed imports.

Professor Rolph may profess lack of interest in real gains or losses, since he is interested in the source of the tax monies (p. 604). This would seem to follow also from his implication, elsewhere, that consumers of taxed products do not bear the burden if their total money expenditures on these products do not rise. See p. 865, below. I submit that such a conception of incidence is a useless one.

This peculiarity of Rolph's conception of incidence is pointed out by James N. Morgan in an earlier comment, which, I regret to say, escaped my attention until the present article was in galley proof. *Am. Econ. Rev.*, Vol. XXXVII, No. 3 (June, 1947), pp. 407-9.

must be incorrect even in the event dollar prices of imports do not rise. This is the case under the conditions which he originally assumes—a uniform *ad valorem* United States tax on all British sources of dollars—to which situation we may now turn. In these circumstances British exporters suffer no loss of pound income, have no incentive to raise their dollar prices or restrict exports, and American exporters do, at the outset, lose income by the full amount of the tax. If American exporters can avoid this loss without imposing it on any one else in the United States, who, then is paying the tax?

British exporters part with the dollars, in the first instance, but evade the consequences by selling each of their remaining dollars at a higher price. To whom? Either directly to U.S. exporters, with pounds to sell, or to British importers, with dollar payments to make for American goods. To the extent the former are mobile, they reduce their supply, or charge higher pound prices, thus in any case shifting the burden to the latter. The tax burden then rests in whole or in part on the British consumers of American goods, who have to pay more pounds for their dollars, or for American goods, because the American government has taken away part of their previous dollar supply.[14]

Although Professor Rolph recognizes the possibility of such an unfavorable outcome for British consumers, he argues on three grounds that they may not "in any meaningful sense" be said to be bearing this tax (pp. 800-801).

1. There is "no obvious medium" whereby money payments get from British consumers to the U. S. Treasury. Actually, the route, as outlined above, seems reasonably direct. British exporters, formerly receiving $5 million, now turn $1 million over to the U. S. Treasury. However, they suffer no loss because British consumers may (assuming unit elasticity of British demand for American goods) continue to pay them £1 million for the reduced number of dollars. British consumers therefore lose the dollars that the U. S. Treasury gains.

2. "All of the tax burden is accounted for domestically," *i.e.*, by American exporters or their competitors. However, it has been our contention that these factors need not suffer any loss in income. Nor, in our present example, are either American consumers or British exporters suffering any loss.

3. This loss of British consumers is matched, not by U.S. tax receipts, but by the corresponding real gain of American consumers, who enjoy the same volume of imports as before and additional products produced by the factors of production no longer required in export in-

[14] However, it is impossible to avoid Professor Rolph's conclusion in his case (1)—where the quantity of American exports is fixed, because of the immobility of export factors. In this situation, the pound price of American goods cannot change, and only American exporters bear any loss.

dustries. However, if, as we have maintained, prices in the American market need not fall, because of the expenditure of the tax receipts (or remission of other taxes, or repayment of debt), the gain accrues not to American consumers, as such, but to the beneficiaries of the new tax receipts: recipients of increased transfer income from the government, or of expanded government services, or taxpayers whose load is correspondingly lightened. Their gain does indeed offset the British loss, because they receive the benefits of the tax which (assuming mobility of American export factors and unit elasticity of foreign demand for U.S. goods) the foreigner pays!

Professor Rolph's second article, which considers the burden of import duties under fixed exchange rates, reaches the same conclusion, with one exception. This exception arises from the possibility of a flow of gold making good the deficiency in E's supply of P's currency (dollars), created by the levy. In this event, P exporters need suffer no loss of income. To the extent that gold does flow, Professor Rolph avers, the duty is really paid, not by P exporters, not by P consumers, but by P's Treasury itself. It purchases the gold, and in this way makes available the currency that it collects or has collected from E exporters. I find this conclusion a strange one, for several reasons.

Professor Rolph has a right to use whatever definitions of "incidence" he finds useful. But when P's Treasury simply exchanges one kind of standard currency—gold certificates—for another, of equal value—gold—it is difficult to see how, in any useful sense, it may be said to be bearing any burden at all. Where, then, does the tax come to rest?[15]

1. E exporters lose both dollars and pounds, when the tax is levied. Unless P's demand is completely inelastic, they cannot entirely pass the tax on to P consumers. How does Rolph avoid the conclusion that they must pay part of the tax? Their immediate income loss is offset, first, he says, by diversion of their resources to production for the domestic market. This is the usual partial equilibrium conclusion: to the extent that E's supply is elastic, E exporters can shift most of the burden to P consumers.[16] The remainder of their loss, he says, is offset by increased net income, after taxes, of other E groups. This occurs because a condition of continued gold flow is a prevention of deflation in E (and inflation in P) by conscious government policy: Rolph assumes this action to take the form of a remission of income tax. The resulting

[15] Here we accept Rolph's postulated condition of a uniform tax on all E sales in P, and no transactions other than merchandise trade.

[16] However, it also raises the possibility, which corresponds to Rolph's case (1), in his first article, that E exporters cannot evade the burden in this way if their factors are immobile. See note 14, above.

increase of domestic expenditure, offsetting the loss of income from abroad, presumably makes it possible for E export factors to shift into domestic production without lowering their own or others' returns.

But, clearly, to the extent that the loss of income of E exporters is offset, or prevented, by this adventitious interference, E's government has taken over the burden of P's taxes. In the end, it may in turn pass the blow on to E's postal employees, or to children who do not get the planned new school house, or to future taxpayers who may have to service the higher debt occasioned by this reduction in tax revenue. In any event, one can scarcely argue that E has shifted the tax in this fashion to anyone in P—least of all P's Treasury.

2. Unless E's supply is completely inelastic, P consumers pay higher prices for E's products (still assuming gold bridges the balance-of-payments gap). How does Rolph avoid the conclusion that they pay part of the tax?

> This view leaves much to be desired. . . . It is possible, to be sure, that United States consumers have inelastic demands for British products and pay absolutely more dollars for fewer goods. But the reverse may equally be true. . . . It would be awkward to suppose that United States consumers bear the tax if their demand elasticity for British goods is less than unity and that they do not bear the tax if their demand elasticity is more than unity (p. 616).

This is certainly an unusual conception of the meaning of incidence. Does Professor Rolph imply that the incidence of an excise tax hinges not on what happens to the price of the taxed commodity, but on what happens to total consumer outlay for it?[17]

The elasticity of P's demands for E goods *is* relevant to Rolph's categorical conclusion that the tax must rest entirely with P's Treasury or P's exporters. If this demand has less than unit elasticity, total P expenditure on E goods will rise, E's net receipts will not decline by the full amount of the tax, and hence neither gold flow nor a deflation-induced reduction of purchases by E of P goods need amount to the full tax payment.

This takes us to the more general case—where deflation in E and/or inflation in P restore balance-of-payments equilibrium, and halt the movement of gold. Rolph's thesis is that both of these developments result in reduced purchase by E of P's goods, thus laying the burden entirely on P export factors (or those with whom they come into competition if they shift into other fields of production). To this argument, I offer the following two objections:

[17] I suspect that he does. See note 13, above.

1. Rolph nowhere considers the possibility that deflation in E or inflation in P will help restore equilibrium also by inducing increased P expenditures on E goods, compared with the pre-tax situation.[18] To the extent this occurs, it would appear, P export factors need not bear the entire brunt of the adjustment.

2. If it is relevant to consider the likelihood of Treasury spending of tax proceeds, P exporters can recoup their losses without forcing them on others, as we have already argued. If this is so, where does the burden rest? To answer this question it becomes necessary once again to turn to the neo-classical theories which Rolph criticizes, as we have previously done in the case of fluctuating exchange rates. For example: let us assume that P exporters do initially bear the entire burden, in the fashion described by Rolph, and that E demand for P exports has unit elasticity. If P's government spends its new revenues to build a new post office, and supply school children with free lunches and baseball uniforms, E export factors may turn to the provision of these goods and services, without loss of income. This results in a reduced supply of P goods in E's market, but an unchanging return in terms both of money and of E goods obtained in exchange. In the case, surely, it is the foreign consumer, and no one else, who is paying for these added goods and services enjoyed by the beneficiaries of P government expenditures. He pays it by giving up the same quantity of goods as before, in exchange for a diminished quantity of P goods, thus releasing some of P factors to the supply of these domestic wants—in short, by poorer barter terms of trade.

[18] He recognizes (pp. 618-19) that deflation in E will increase the volume of its exports. But this adjustment merely operates in the direction of restoring the volume, hence the dollar price, to the pre-tax level, from which they had departed because of the shifting of E factors of production out of export industries. In the end, therefore (he implies but nowhere says, explicitly) gross dollar receipts (including taxes) will be at the pre-tax level, and net receipts will be lower by the full amount of the tax. Meanwhile, E deflation directly and immediately reduces earnings of P exporters.

While this demonstrates clearly that the brunt of the adjustment of E's deflation will fall on P export revenue, it by no means proves that the recovery of the volume of E exports, the decline of dollar prices, and the recovery of gross revenue (assuming elastic demand) need halt precisely at pre-tax levels. It is certainly possible that part of the balance-of-payments gap will be eliminated by a rise in E gross export revenue over the pre-tax level.

This would seem especially true to the extent that equilibration occurs through inflation in P. Here (pp. 624-25) it is literally true that Rolph does not consider the effect on E export volume. If deflation in E restores equilibrium by shifting E's demand curves (including the demand for imports from P) to the left, it is difficult to see why inflation in P will not restore equilibrium by shifting P's demand curves (including the demand for E's products) to the right!

Rejoinder by Earl R. Rolph

Because of space limitations I shall confine my remarks to the portion of Mr. Kahn's criticisms which appears most damaging to my general proposition that import taxes are borne internally by reducing the money incomes of exporters and their competitors for income,[1] rather than by foreign consumers and domestic consumers as the reciprocal demand tradition holds or by foreign producers and domestic consumers as the partial equilibrium approach holds.

On pages 861-63, Mr. Kahn develops the important criticism used in conjunction with several later arguments, that my conclusions implicitly assume income deflation in the taxing country (P) and that my results would not follow if I had assumed that the "government spends the tax proceeds."[2] He holds that if the government increases its expenditures equal to the tax yield, the incomes of other groups in the economy offset any losses to P's exporters, and if perfect mobility exists there is no loss at all to those in export industries. My exposition might have been clearer on this point. The use of some illustrative figures for income accounts will, I believe, demonstrate that no such assumption is involved. Suppose the following facts:

Period 0		Period 1		Period 2	
$E = 40$		$E = 40$		$E = 41$	
	$Y_g = 40$		$Y_g = 41$		$Y_g = 41$
$C = 150$		$C = 150$		$C = 149$	
	$Y_p = 175$		$Y_p = 174$		$Y_p = 174$
$I = 25$		$I = 25$		$I = 25$	
$N = 215$	$Y_r = 215$	$N = 215$	$Y_r = 215$	$N = 215$	$Y_r = 215$

In period 0, there are no import taxes. Government expenditures upon products (E), private consumption expenditures (C), and private net investment (I) equal net national product (N). Government net income (Y_g) together with private net incomes (after deducting taxes) (Y_p) equals net income of the community as a whole (Y_r).[3] The import

[1] In the case of fixed exchanges with gold or foreign exchange movements toward the taxing country, the taxing government pays in part or in whole its own taxes.

[2] This expression is not a happy one. It suggests that balanced budgets must be supposed for purposes of tax theorizing, which if true means that conclusions can have little applicability to actual economies.

[3] A detailed exposition of the meaning of these concepts as used may be found in E. R. Rolph, "The Concept of Transfers in National Income Estimates," *Quart. Jour. Econ.*, Vol. LXII (May, 1948), pp. 327-61.

duties go into effect at the opening of Period 1 and with self-adjusting exchanges appreciate the dollar and result in a loss of income to P's exporters equal to the yield of the tax. This is shown by a reduction in private money incomes to 174 in Period 1. To this point, Mr. Kahn and I are in agreement (see footnote 14 of his paper). In accord with his suggestion, P's government is assumed to increase its expenditures to a total of 41—an increase equal to the tax. Hence P's government fiscal action has a neutral income effect over time because its present expenditures equal its past period income.[4] If private groups also behave in a neutral manner, the increase in government expenditures is offset by an equivalent decline in private expenditures, shown as a reduction in C to 149. For the three periods there is no aggregate income deflation, but of course private incomes have fallen by 1. As the exporters adjust, the best they can do is to spread some of this loss over other income recipients by competition. In subsequent periods, their shift to other fields brings down the money incomes of those already established there, leaving aggregate private net incomes lower by 1.

If, instead, P's government were to reduce another tax to offset the deflationary effect on private consumption (or investment) expenditures occasioned by the increased yield of the import taxes, there is likewise no aggregate income deflation. The theory does not require a particular assumption as to how a government adjusts to a higher yield of one tax. In my original exposition, the argument is presented in terms of what people's money incomes net of taxes are in the present as compared to what they would be in the present rather than what they historically were before the imposition of taxes, which is a more general and I believe a more accurate way of posing the problem. But Mr. Kahn is mistaken in supposing that the argument presupposes net value product deflation over time. It does, of course, assert that private net incomes (after taxes) are reduced, which is one reason for holding that import taxes act like income taxes collected at the source. Because Mr. Kahn believes I have fallen into error in implicitly assuming aggregate income deflation, at many subsequent points in his criticisms he assumes the yield of the tax is not fully accounted for and looks to foreign or domestic consumers for an adequate explanation. But if the above argument is valid, his explanation accounts for more tax burden than the tax yields to P's government.

In attempting to place some of import tax burden upon foreign con-

[4] This exposition is based on the type of monetary theory espoused by D. H. Robertson without his terminology. Note that the test of whether a government behaves in an inflationary, deflationary, or neutral manner involves comparison of its income in one period with its income-generating expenditures in the next. This means that budgets which are simultaneously in balance need not give neutral results.

sumers, Mr. Kahn argues that E's consumers do provide dollars to P's government. But how can E's consumers have dollars when with fluctuating exchanges, no dollars are to be found among the British at all, except the dollar checks of P's importers momentarily in the hands of E's exporters? British consumers cannot pay taxes in dollars because they have no dollars.

For the case of fixed exchanges, Mr. Kahn objects to my conclusion that with no internal monetary adjustments to gold flows, P's government pays its own taxes. His criticism does not take into account the mechanics of international gold or foreign exchange movements (see page 864 of his comment). When the United States Treasury buys gold, it releases cash (not gold certificates) of equal amount to the seller. It may or may not, but usually does, restore its balance by having the Reserve Banks increase their gold certificate account. The point omitted by Mr. Kahn is the release of cash by the Treasury. In the case of import taxes with no internal adjustments, the Treasury does not release cash on balance because the demand deposits it releases in exchange for gold go into the foreign exchange market and back to the Treasury as tax yield. When it is stated that the Treasury in such a case bears its own tax, it does not mean that there is anything painful involved. I mean that the Treasury act of buying gold (or foreign exchange) generates income which accrues to the Treasury itself as tax yield. Normally it would accrue to private groups.

Several of the criticisms made by Mr. Kahn involve technical points, particularly those relating to non-uniform duties, which would take too much space to discuss adequately at this time. Cases where import taxes may occasion higher prices for imports were discussed in the original papers, but not considered as evidence that consumers pay such taxes and for two general reasons: (1) the yield aspects of the tax can be fully accounted for in a precise way in the income effects and (2) the theory as suggested is more general in the sense that it is consistent and symmetrical regardless of the resource allocation effects of the tax. Perhaps I should have explained in the articles in question that they were designed as a part of a general revision of ordinarily accepted theories of all kinds of excise taxes.[5]

[5] I should like to acknowledge at this time the criticisms of J. N. Morgan (*Cf.* "The Burden of Import Duties: A Comment," *Am. Econ. Rev.*, Vol. XXXVII [June, 1947], pp. 407-409), who defends the neo-classical theory against my objections. Some of his criticisms are dealt with in the foregoing remarks.

MARGINAL COST CONSTANCY AND ITS IMPLICATIONS

By HANS APEL*

To judge from some recent indications, it almost seems that the proposition of marginal cost linearity resembles the hydra of mythical fame: it continues to thrive in spite of much well-founded criticism against it. One can observe a dangerous tendency to misinterpret the evidence of the case and to build on insufficiently tested ground.[1] Perhaps it is the very extent of the discussion concerning this problem that has made the evidence behind it appear much stronger than it actually is. Two recent contributions which have attempted to draw implications from this assumed cost linearity demonstrate the issue well: they are Professor Hansen's article on "Cost Functions and Full Employment,"[2] and Professor Eiteman's communication dealing with the "Factors Determining the Location of the Least Cost Point."[3] Since they refer not only to interesting aspects of theory but also bear directly on matters of great practical importance, it becomes imperative to appraise the validity of these arguments after drawing attention once more to the status of the cost-curve controversy with which they are so intimately connected.

I

In order to gain from the start a somewhat clarified picture of the empirical evidence that has accumulated so far, the pertinent studies so frequently quoted in this discussion are roughly characterized in the table on page 871.

The three studies in group I are of a more general nature and cannot by their very nature contribute much to the complex problem of the cost function. The latter, it must be kept in mind, is a *ceteris paribus* proposition that demands an intricate processing of the normally available accounting data, if these are to yield the hidden relationship which the cost function represents.

The Topkis and Hall-Hitch studies, both primarily concerned with

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[1] This seems to account for the strange presentation found in the latest edition of Professor Froman's textbook *Principles of Economics* (R. D. Irwin, Chicago, 1946), when the various pertinent strands are tied together. While apparently accepting the evidence for cost linearity at its face value, he nevertheless assumes a "very sharply" rising marginal cost curve (pp. 342, 343, 379n, 390n, 391).

[2] *Am. Econ. Rev.*, Vol. XXXVII, No. 4 (Sept., 1947), pp. 552-65.

[3] *Am. Econ. Rev.*, Vol. XXXVII, No. 5 (Dec., 1947), pp. 910-18.

other aspects of their investigation, get their results mainly from unprocessed accounting data, the former obviously including "labor overhead costs," the latter, general overhead as well as selling costs. This, of course, introduces the very elements of complexity which under the *ceteris paribus* qualification should be eliminated before the true cost function can be established. Apart from this procedural shortcoming, the evidence presented for marginal cost linearity is not impressive. Only one of the firms interviewed by Hall-Hitch reported decreasing

Cost Studies

Year of Publication	Author	Industry Studied	Number of Firms Studied
I. *General Cost Studies*			
1936	Topkis[a]	Cement	12
1939	Hall-Hitch[b]	Miscellaneous	38
1941	Oliver[c]	All industry	—
II. *Cost Function Studies*			
A. *Based on data within "normal" range of output*			
1933	Ehrke[d]	Cement	1
1935	Topkis-Rogers[e]	Steel	15
1940	Yntema[f]	U. S. Steel Corporation	1
1941	Ezekiel-Wylie[g]		
1941	Dean[h]	Leather belts	1
1941	Dean[i]	Hosiery mill	1
1946	Lester[j]	Miscellaneous	58
B. *Based on data for entire output range*			
1940	Whitman[k]	Department store	1

[a] B. H. Topkis, "Labor Requirements in Cement Production," *Mo. Lab. Rev.*, Vol. XLII (Mar. 1936), p. 575.

[b] R. L. Hall and C. J. Hitch, "Price Theory and Business Behaviour," *Oxford Economic Papers*, No. 2 (May, 1939).

[c] H. M. Oliver, Jr., "The Relationship between Total Output and Man-Hour Output in Manufacturing Industry," *Quart. Jour. Econ.*, Vol. LV (Feb., 1941), pp. 239–54.

[d] Kurt Ehrke, *Die Ueberzeugung in der Zementindustrie von 1858–1913*," (Jena, 1933), pp. 251–310.

[e] United States Steel Corporation, T.N.E.C. Papers (U. S. Steel Corp., New York, 1940), pamph. 6.

[f] B. H. Topkis and H. O. Rogers, "Man-Hours of Labor per Unit of Output in Steel," *Mo. Lab. Rev.*, Vol. XL (May, 1935), p. 1161.

[g] M. Ezekiel and K. H. Wylie, "Cost Functions for the Steel Industry," *Am. Stat. Assoc. Jour.*, Vol. XXXVI (Mar., 1941), pp. 91–99.

[h] Joel Dean, *The Relation of Cost to Output for a Leather Belt Shop* (Nat. Bur. Econ. Research, New York, 1941).

[i] Joel Dean, *Statistical Cost Functions of a Hosiery Mill* (Univ. of Chicago Press, Chicago, 1941).

[j] R. A. Lester, "Shortcomings of Marginal Analysis for Wage-Employment Problems," *Am. Econ. Rev.*, Vol. XXXVI, No. 1 (Mar., 1946), pp. 67–75.

[k] See "Round Table on Cost Functions and their Relation to Imperfect Competition," *Am. Econ. Rev.*, Vol. XXX (May, 1940), pp. 400–02.

marginal cost "up to full capacity"; of the twelve others with decreasing marginal costs, five were clearly operating at low depression outputs, and there is no clear indication that the same was not true of the remaining seven firms.[4]

The cement industry, which Topkis studied, has a rather uncommon technology. Each plant usually has several kilns. A kiln must be operated at full capacity if at all; so output variations are effected by operating fewer or more kilns. Kilns of the same type and size, working at uniform full capacity, cannot possibly have different cost functions. This means that the decreasing costs which the study reveals must necessarily be traced to the influence of overhead costs.

Oliver's investigation undertakes a comparison between aggregate production and employment data for the period 1933-1938, these data being taken from Federal Reserve Board and Bureau of Labor statistics. Since average industrial output during this period was certainly close to the least cost point on a conventionally shaped cost curve, constant or slightly decreasing costs such as he establishes are to be expected.[5]

If we turn now to an appraisal of the more specific cost function studies as listed in group II, the following basic strictures apply:

1. Of the studies under (A), five were admittedly based upon plant operations considerably short of the peak capacity technically possible. The two others, while claiming validity for the entire output range, do not substantiate this claim satisfactorily.[6] The linearity conclusions drawn from these studies consequently do not apply to the extreme right of the output range which is the very region of crucial importance in regard to the behavior of the marginal cost curve. The only study, listed under (B), which definitely refers to the entire range, establishes constant cost under normal conditions but steeply rising marginal costs at the seasonal Christmas peak. Conventional assumptions of severely diminishing returns at extreme levels of output are thus clearly upheld.

2. The adequacy of the methods and techniques used in these studies which deal with an inherently very difficult problem, must seriously be

[4] To judge from Hall-Hitch's "Appendix E," only 13 out of the 38 firms questioned gave pertinent answers, the above mentioned 10 firms indicating decreasing, the other 3 increasing costs. Footnote 1 on page 20 of their article, however, refers to 13 firms with decreasing, 4 with constant, and 2 with increasing costs.

[5] The author recognizes this when he says: "During that period recovery never progressed to the point where there was no longer . . . a considerable amount of unused capacity" (*op. cit.*, p. 253).

[6] This refers to the cases of Ehrke and Lester. With regard to Ehrke, Staehle (see footnote 7) states on page 328 that he is the "only one to have secured observations . . . on (the) extreme reaches of the total cost curve. . . ." This, however may be doubted because he refers to only one such case in which the highest rate of output is not more than 7 per cent beyond the one obtainable at least unit cost. Professor Lester's claim of covering output ranges up to full capacity falls to the ground as soon as one doubts that he has succeeded in establishing a clear concept of "capacity."

doubted, as shown in the critical appraisals listed below.[7] These pertinent strictures can be summarized as follows:

a. Empirical studies of the cost function run up against a host of difficult problems; these consist in eliminating effects from (a) technological change, (b) change in the size of equipment, (c) changes in factor prices, (d) changes in the rate, direction, permanence, and spread of output; and in (e) measuring a diversified output, and (f) separating costs, unless they are in the most immediate sense direct ones, into those which depend on lapse of time and those which depend on utilization.[8] Only if all this is successfully done, is the *ceteris paribus* condition which the theoretical cost function implies fulfilled.
b. Even very slight deviations from cost linearity are sufficient to cause considerable curvature in the marginal cost curve. But such deviations, though existing in reality, are likely to disappear due to biases in the procedure which specifically flow from (a) the generally used method of straight line depreciation, (b) the use of a fairly long output unit leading to average output rates, and (c) from the fact that statisticians frequently prefer the adoption of a linear equation regression.[9]
c. While all these objections question the reliability of the results shown by the various empirical studies, the possibility of cost linearity if viewed as an exceptional and special case only, is in no way excluded by conventional marginal theory. Cost functions, either almost or fully linear, should be expected wherever given conditions of production are inherently unfavorable to diminishing returns, as may be the case where the capital/labor ratio is small, or where a high degree of flexibility is built into a plant, or where a plant is designed for uniform peak performance.[10]

It is pertinent to point out that these criticisms have not been re-

[7] G. J. Stigler "Production and Distribution in the Short Run," *Jour. Pol. Econ.*, Vol. 47 (June, 1939), pp. 312-22.

R. Ruggles, "The Concept of Total Linear Cost Output Regressions," *Am. Econ. Rev.* Vol. XXXI, No. 2 (June, 1941), pp. 332-35.

C. R. Noyes, "Certain Problems in the Empirical Study of Costs," *Am. Econ. Rev.*, Vol. XXXI, No. 3 (Sept., 1941), pp. 473-92.

Hans Staehle, "Statistical Cost Functions: Appraisal of Recent Contributions," *Am. Econ. Rev.*, Vol. XXXII, No. 2, Pt. 2 (June, 1942), pp. 321-32.

Caleb Smith, "Cost-Output Relation for U. S. Steel," *Rev. Econ. Stat.*, Vol. XXIV (Nov., 1942), pp. 166-76.

Cost Behavior and Price Policy (Nat. Bur. Econ. Research, New York, 1943).

Everet Straus, "Cost Accounting and Statistical Cost Functions," *Am. Econ. Rev.*, Vol. XXXV, No. 3 (June, 1945), pp. 430-31.

[8] *Cf.* Staehle, *op. cit.*, p. 324; Smith, *op. cit.*, p. 166; Noyes, *op. cit.*, p. 491; *Cost Behavior*, pp. 52-77; Straus, *op. cit.*, pp. 431-32; and Stigler's comment in "Round Table on Cost Functions," *Am. Econ. Rev.*, March, 1940, p. 401.

[9] *Cf.* Smith, p. 166; Ruggles, p. 334; Staehle, p. 329; *Cost Behavior*, pp. 88 and 96.

[10] *Cf.* Stigler, "Production and Distribution in the Short Run," *Jour. Pol. Econ.*, June, 1939, pp. 312-22; *Cost Behavior*, pp. 111-13.

futed, but have been reaffirmed in the exhaustive "Cost Behavior" study.[11]

3. The sample is small and unrepresentative. The two studies which provide the bulk of the evidence, in so far as numbers of firms are concerned, are the least convincing. The Topkis-Rogers investigation of 15 steel producers represents the situation of these mills at a time when they were operating at 55-60 per cent of their capacity. This means that the stricture referred to under (1) applies. The Lester study, which relates to 58 firms, suffers from particularly severe procedural defects: such as the exclusive use of so unreliable a method as the questionnare technique and of an undefined and highly ambiguous concept of "capacity."[12] There is also good reason, supported by Professor Lester's own argument, to doubt the representative character of the firms he has investigated.[13]

4. It is this writer's contention that the Ehrke study has been misinterpreted with regard to the cost-linearity conclusion. Ehrke himself, it is true, makes this claim, which Staehle has also accepted.[14] But a

[11] *Cf. Cost Behavior,* pp. 110-11, where the following conclusion is offered: "The examination of empirical studies in Sections 2 and 3 concluded that in the cases explored a linear cost function was the most probable relation *within the observed range* of fluctuations of output, although *basic difficulties in the methods and techniques made it impossible to place sufficient confidence in the solution to preclude marginal cost curves with considerable curvature.* This conclusion *certainly does not justify the statement that all cost functions are linear,* but it does suggest that the conditions underlying discussions of 'diminishing returns' not only need to be re-examined, but *may* not be as typical as presumed. *Indeed, even so cautious a conclusion as this must be qualified.* The results of the several types of empirical studies designed to measure cost-output relationships must be *substantially influenced* by the accounting conventions for allocating costs over different periods" (italics supplied).

[12] Professor Machlup, in his article on "Marginal Analysis and Empirical Research," *Am. Econ. Rev.,* Vol. XXXVI, No. 4, Pt. 1 (Sept., 1946), pp. 550-52, has already criticized this procedure. This writer feels even more strongly in this regard, and considers the use of an undefined "capacity" concept, the ambiguity of which is stressed even in elementary economics, an outrightly "objectionable" course. Professor Lester has countered such criticism with the assertions that "definition was not necessary" and "would only have been confusing and fruitless." (See his "Marginalism, Minimum Wages, and Labor Markets," *Am. Econ Rev.,* Vol. XXXVII, No. 1 [March, 1947], p. 138.) May this not indicate that Professor Lester, recognizing the difficulties of his project, preferred to evade them rather than to overcome them? After all, he himself admits at least the partial justification of the criticisms when he says that "*most* of the businessmen I have talked with *seem* to think of plant capacity" in the way assumed by him (*ibid.,* italics supplied); and such different answers as "Theoretical 100% is likely to produce too many strains" and "By reducing from more than 100% of capacity to 100%, costs are likely to fall" testify clearly to the underlying confusion. *Cf.* "Shortcomings of Marginal Analysis," *Am. Econ. Rev.,* March, 1946, pp. 68, 70.

[13] He remarks that "the flexibility of many plants is, however, extremely limited, especially those designed for earlier stages of manufacturing such as the smelting, refining, compounding, and rolling of materials" (*ibid.,* p. 73). Not one of the 58 firms investigated by Professor Lester belongs in this important group in which conditions of diminishing returns are likely to be more accentuated.

[14] *Op. cit.,* p. 326.

close inspection of Ehrke's chart opposite page 305 shows, particularly with regard to the lines representing the periods of 1888-89 and 1897, that the linearity is only apparent and not real. Marginal costs derived from his figures in Table 9, p. 304, are in six cases out of the eight that can be traced, sharply increasing, even while unit costs continue to decline. It is wholly implausible to assume that the sharply rising trend in the marginal cost curve before it cuts the average curve should not continue beyond the latter. And this is exactly what happens in the only recorded case where production is carried beyond the least cost point.[15] The linearity conclusion is not borne out at all by these facts. The fact that this firm, with one exception, always operated within the decreasing cost range admits of two alternative explanations: either capacity was always kept ahead of demand, or this was a case of a plant designed for high capacity production. The latter fact would naturally express itself in a cost curve on which the least cost point would lie relatively far to the right.

The following propositions, it would seem, are fair conclusions summing up the evidence as related to the present status of the cost curve controversy:

1. The evidence suggests that the normal range of output, apart from the extremes of a cost curve, may frequently have constant unit costs rather than the slightly decreasing and increasing cost behavior shown in the conventional diagrams.

2. The main assumption, flowing from the concept of diminishing returns, that the marginal cost curve must show steep extremes has not been disproved. On the contrary, it was upheld in the few cases where a reliable test was possible.

3. A conclusion as to what actually is the "typical" shape of the cost curves cannot be drawn from the evidence. Since, on *a priori* grounds it seems doubtful whether a "typical" cost curve can result from the diversity of cost conditions, the conventional type of presentation still retains its merits.

4. Considering, as Stigler does, flexibility as the potential clue to cost linearity, and viewing the achievement of greater flexibility as one aspect of the general process of technological improvement, one may venture the idea that a trend towards cost linearity over the normal range of output is indicated. If, through more refined methods, which would have to remove the linear bias in our empirical approach, such linearity would be supported, a double-kinked shape in which the two

[15] The figures show this strikingly: average unit costs are 5.73, 4.89, 4.88, and 5.12 accompanying outputs of roughly 6.000, 9.700, 10.500, and 11.000 units; marginal costs for the last three output figures are 3.56, 4.74, and 10.00. If one takes into consideration that net price was around 11.00, output only 7% beyond the optimal cost point, it almost seems that conscious marginal considerations may have dictated output determination.

kinks would separate the steep extremes from an almost or entirely flat middle range, might then emerge as most representative of general cost behavior.[16] But if such functional dependence on the state of technological development should prevail, this might imply the existence of a great many cost curve shapes "typically" related to specific industries. It might be a fruitful suggestion for researchers to work in this direction.

II

Professor Hansen, in his previously mentioned article, investigates the specific effects that cost linearity would exercise upon the achievement of a full-employment economy. Since, within the context of his thesis, only the linearity at the extreme right of the cost curve matters and since this has been shown to be a not sufficiently supported proposition, his entire argument becomes exceedingly hypothetical.

Although there are several references to the "tentative" character of the empirical results upon which the argument is based, Professor Hansen's procedure is not sufficiently careful to avoid misinterpretation, or even misrepresentation, of the results. In all the three instances in which Professor Hansen points to the support which the cost linearity thesis has found, his presentation is incomplete and misleading: Keynes, contrary to Professor Hansen's interpretation, had definitely refused to accept this thesis.[17] The "Cost-Behavior" study is cited as support without any reference to the severe strictures against the validity of

[16] A similar approach, obviously coincidental, can be found in J. S. Bain, *Pricing, Distribution, and Employment* (Henry Holt and Co., New York, 1948), p. 77.

[17] Relevant passages of Keynes' article are cited as indicative of a change of heart: "Is it the assumption of increasing marginal cost in the short period which we ought to suspect? Mr. Tarshis finds part of the explanation here, and Dr. Kalecki is inclined to infer approximately constant marginal cost. . . . We should all agree that if we start from a level of output very greatly below capacity, so that even the most efficient plant and labour are only partially employed, marginal real cost may be expected to decline with increasing output, or, at the worst, remain constant. *But a point must surely come, long before plant and labour are fully employed,* when less efficient plant and labour have to be brought into commission or the efficient organization employed beyond the optimum degree of intensiveness. Even if one concedes that the course of the short-period marginal cost curve is downwards in its early reaches, Mr. Kahn's assumption *that it eventually turns upwards is, on general common-sense grounds, surely beyond* reasonable question; and that this happens, moreover, on a part of the curve which is highly relevant for practical purposes. *Certainly it would require more convincing evidence than yet exists to persuade me to give up this presumption.* . . . Nevertheless it is of great practical importance that the statisticians should endeavour to determine at what level of employment and output the short-period marginal cost curve for the composite product as a whole begins to turn upward and how sharply it rises after the turning-point has been reached" (italics supplied). (In "Relative Movements of Real Wages and Output," *Econ. Jour.*, March, 1939, pp. 44-45.)

much of the research methods involved.[18] And, finally, the criticism of Lester's grave procedural defects which Professor Machlup had supplied in great detail, is by-passed with the remark, relegated to a footnote, that it contained no successful attack against the empirical findings.

Apart from its weak foundation, the argument contains a number of inconsistencies, and the crucial part of the underlying theoretical reasoning lacks validity.

First, the linearity thesis itself is used in a highly inconsistent manner throughout the argument. The latter rests basically on the assumption that the marginal cost curve, in accordance with results established by recent empirical research, can be assumed to be linear *up to full capacity*. A number of passages are fully in line with this view.[19] But others are not.[20] They indicate merely the assumption that linearity prevails *over large ranges of output*, but not over the extreme right of the cost curve. Since these two propositions represent the crucial difference in the entire cost-curve controversy in which Professor Hansen takes so decided a stand, he cannot logically have both opinions at the same time. For the sake of his argument, however, both views prove to be convenient: the first is used to overcome the difficulties of a transition period to full employment in which the economy is not "perched high up on *steeply* rising marginal cost curves,"[21] while only the second one is able to support the overcapacity-argument which Professor Hansen so greatly emphasizes for the period of established full employment.

Secondly, it seems inconsistent to combine the thesis of induced overcapacity during full employment and the belief in prevailingly linear marginal cost curves. If this belief is justified in regard to present conditions, it should be no less appropriate for conditions of full employment.[22] If, on the other hand, marginal costs remain con-

[18] *Cf.* Hansen's statement, "The Committee concludes that empirical studies indicate with few exceptions a linear cost-output relationship" (*op. cit.*, p. 560), with the cautious wording cited in footnote 11.

[19] ". . . as boom conditions are approached" (*ibid.*, p. 559): ". . . as boom conditions of demand develop (*ibid.*, p. 557); ". . . assumptions usually made with respect to sharply rising marginal cost curves" and ". . . without the economy being perched high up on steeply rising marginal cost curves" (*ibid.*, p. 561).

[20] ". . . Keynes . . . concluded that possibly the cost curves were flatter than he had formerly supposed" (*ibid.*, p. 559); ". . . The suggestion that marginal costs approach the 'horizontal over large ranges of output' is of the utmost significance . . ." (*ibid.*, p. 560); "If these assumptions are correct, it means that we shall be compelled to operate for a period under conditions of high marginal cost . . ." and ". . . until we become sufficiently saturated with plant and equipment so that cost functions would again become linear" (*ibid.*, p. 563).

[21] Italics supplied by this writer.

[22] As argued on p. 882, cost linearity appears to be much more feasible under established full employment than it is now.

stant, or even decrease up to capacity, the overcapacity assumption becomes absurd.

Thirdly, there is certainly a lack of coherence when the role of marginal costs in the price-determining process is highly stressed on one side, and, on the other side, Professor Lester's empirical findings, which attempt to undermine this role, are upheld.[23] Finally, Professor Hansen's two statements mentioned below[24] present a hardly reconcilable contradiction, unless "vigorous" booms are assumed not to be "short-lived," which is certainly not a generally valid proposition.

The main criticism, however, rests primarily on objections against the two fundamental tenets of the argument: one, the implication that "the structure of *costs,* prices and profits" (italics supplied)[25] holds the clue to the problem of full employment; the other, that linear cost functions "are a highly favorable fact for full-employment policy."[26] Compared with these objections, some others related to the role which overcapacity would have to play under attained full employment, and to the oversimplified solution of the problem of possible labor shortages, play a relatively minor role.

Professor Hansen does not state clearly what specific relationships he has in mind when he refers to this "structure of costs, prices and profits." From the entire context, however, one must conclude that it refers specifically to the influence that marginal costs are bound to exercise upon prices and profits. Without going into the complex processes which govern price determination, Professor Hansen seems to assume that steeply rising marginal costs alone are responsible for the "abnormally high profits" that cause general instability and fateful distortion of income distribution.[27] It is not easy to see how this assumption can be backed up. Under perfect competition there can be no direct price-determining influence from marginal costs; these bear only on output determination which, in turn, influences aggregate supply which, finally, affects price. Under conditions of monopolistic competition, output and price determination are mutually related and depend upon the assumed shape of the demand curve. Where prices are administered, marginal costs can hardly be assumed to have any effect,

[23] See Topkis, "Labor Requirements in Cement Production," *Mo. Lab. Rev.,* March, 1936, p. 560, footnote 4.

[24] During the short-lived boom "there is neither time nor incentive to bring capacity up to . . . low unit cost" (*op. cit.,* p. 558); during sufficiently vigorous booms, "capacity tends to be adjusted to the 'peak load' so that total unit costs, even at high output, are fairly flat" (*ibid.,* p. 564).

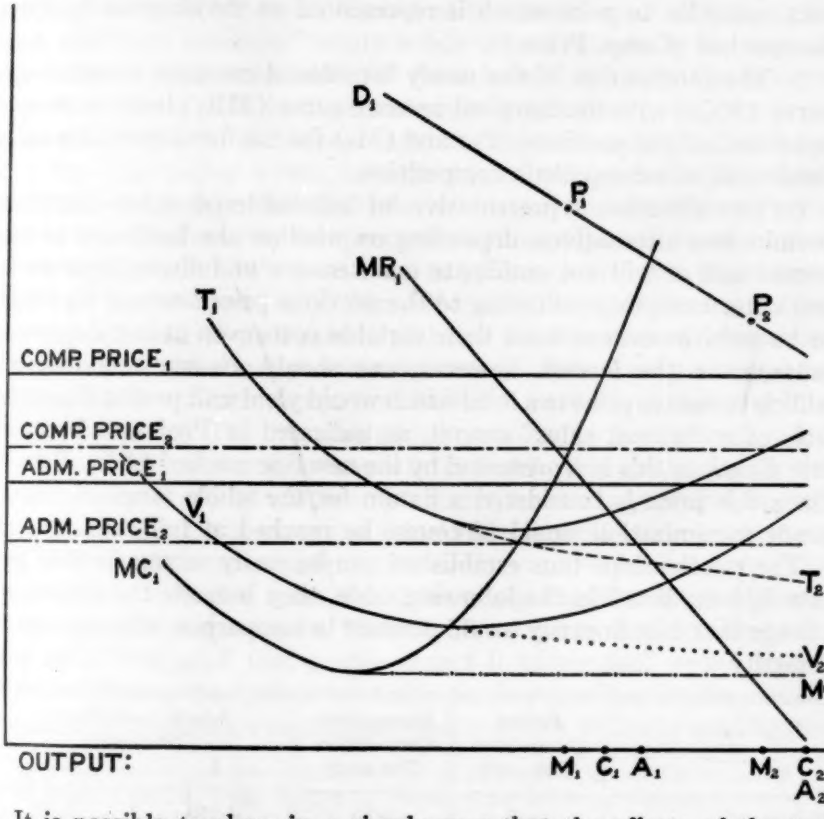
[25] *Ibid.,* p. 553. A determining relationship between marginal costs on one side, prices and profits on the other is also assumed on pages 562, 564.

[26] *Ibid.,* p. 560.

[27] Various references can be found on pages 553, 558, 561, 564,

because this would introduce the very price instability which this technique attempts to prevent.

While the preceding brief remarks show in which direction the cost effects must be traced, one must keep in mind that the marginal principle does not operate automatically and frictionless. In practice, it will tend to be impaired. The rational conduct which it presupposes is often absent in businessmen, and it is particularly admitted that its force is weakest under the extreme conditions of either depressions or booms where other considerations often take precedence.[28] Under this aspect, it is likely that the case for the effects of marginal costs on prices is overstated when one assumes unimpaired rational behavior on the part of those concerned.



It is possible to show in a simple way that the effects of the two relevant shapes of marginal cost curves on profits are not at all so clear as Professor Hansen suggests. The diagram above attempts to present the case. The lines, curves, and positions denoted with the subscript (1) are identical with those relating to boom conditions in Professor Hansen's three diagrams; those denoted by the subscript

[28] *Cf.* Keynes, *op. cit.*, sec. V, pp. 46-47; also Machlup, *op. cit.*, pp. 520-21.

(2) describe the changed conditions under constant marginal costs.

Inspection of the diagram in connection with the guiding remarks previously laid down reveals that:

a. Under perfect competition the boom demand curve and the constant marginal cost curve can never meet. This does not prove the marginal principle wrong, but implies only that whenever price is above marginal costs—as certainly is to be expected in the boom—output tends theoretically to infinity, and practically to peak capacity. This new output C_2 is 30 per cent higher than C_1 was. If one assumes the *aggregate* demand curve to have an elasticity of 2 over the relevant range, which cannot vary much from Professor Hansen's underlying assumptions, a 30 per cent increase in supply would lead to a 20 per cent reduction in price which is represented on the diagram by a new line marked (Comp. $Price_2$).

b. The intersection of the newly introduced constant marginal cost curve (MC_2) with the marginal revenue curve (MR_1) leads to the new price and output positions (P_2) and (M_2) for the firms operating under conditions of monopolistic competition.

c. The situation representative of administered price conditions permits two alternatives, depending on whether the businessmen concerned will or will not anticipate maintenance of full employment. In the latter case, they will cling to the previous price because they want to be sure to cover at least their variable costs even at low depression outputs; in the former, however, one should assume that they are willing to reduce price to a level which would yield unit profits characteristic of a "normal sales" output, as indicated in Professor Hansen's last diagram; this is represented by the new line marked (Adm. $Price_2$). Once this price is considered a datum for the whole range of output, profit maximization would of course be reached at full capacity.

The relationships thus established can be easily summarized in precise figures; listed in the following table, they indicate the percentage change that cost linearity would produce in comparison with cost curvilinearity.

	Perfect Competition (Per cent)	Monopolistic Competition (Per cent)	Administered Price[29] (Per cent) I	II
Unit profit	− 5	−20	+550	+150
Total profit	+29	+ 6	+700	+215
Output	+35	+32	+ 30	+ 30
Sales	+10	+ 6	+ 30	± 0
Prices	−20	−20	± 0	− 20

[29] In the light of Professor Hansen's remark on page 559, the very high percentage increases shown below reflect the utterly low profits of the base period rather than implausibly high profits under the new conditions.

Certainly, these results, which claim only approximate validity, do not bear out Professor Hansen's contention but show a tendency towards even higher total profits on the whole, and towards that greater instability to which they are inherently linked.

It is this latter aspect to which Professor Hansen's second fundamental tenet refers. His assumption of the favorable effects of linear cost functions which is identical with a belief in their stabilizing effects, flows logically from the wrong and unsubstantiated idea that they would mitigate high profits to a considerable extent. Apart from the preceding evidence to the contrary which undermines the very foundation of this tenet, it is, however, hard to see how Professor Hansen could ignore a most definite warning which he could hardly have overlooked. For, his pertinent statement is made almost as the continuance of a quotation from the "Cost Behavior" study which ushers in exactly the opposite conclusion of greater instability.[30] Such instability might imply favorable effects in a period of general under-employment, but not under boom conditions. In the former case, cost linearity would be conducive to a low price policy which, in turn, due to greater *in*stability, would favor increased output levels. In the latter case, the cost effect on prices will be overshadowed by the pressure from supply and demand conditions, and output levels forced up to peak capacity are no unmixed blessing. Under boom conditions, U-shaped marginal costs, if they have an influence on profits at all, take on the character of a brake and do not render the situation more precarious. This is only a reiteration of the maladjustment concept that underlies so much of accepted business cycle theory. The dilemma which confronts us in the boom, which Professor Hansen seems to have overlooked in this connection, is that both low as well as high costs can produce the same high profits, because these are a function of costs *and* prices reflecting only their relative and not their absolute magnitudes.

A further criticism must be directed against Professor Hansen's thesis that full employment, "if maintained for a considerable period and on a basis such that people expect it to persist," would tend to produce large overcapacity favorable for low-cost production and for a tendency towards an equilibrium profit rate.[31] With the qualification

[30] The two versions compare as follows: "If marginal costs approach the horizontal over large ranges of output, small changes in demand make for larger changes in output. An economic system with linear cost functions is more unstable than one with markedly U-shaped marginal cost functions" (*Cost Behavior*, pp. 109-10). "The suggestions that marginal costs approach the 'horizontal over large ranges of output' is of the utmost significance since, if this is so, small changes in demand will tend to permit large changes in output without significant price increases. If the economic system has linear cost functions, this is a highly favorable fact for full-employment policy" (Hansen, *op. cit.*, p. 560).

[31] *Ibid.*, pp. 558, 564. See also the remarks on p. 877 with regard to the inconsistency implied in the overcapacity assumption.

which this conditional clause contains, the cart is obviously put before the horse. If cost-price-profit relationships should actually be as unfavorable for the establishment of full employment as Professor Hansen attempts to show they may not be, both its maintenance for a considerable period and the belief of people in such maintenance cannot very well materialize.

But even if one assumes these preconditions as given, Professor Hansen's conclusions would seem to be justified only under highly competitive general conditions. That full employment should automatically create a thoroughly competitive atmosphere is neither a reasonable proposition nor has Professor Hansen suggested it. Barriers to easy entrance into the most important fields of industry would therefore remain at best as formidable as they are today; and without strong and rather universal pressure from new entrants it seems doubtful that businessmen should easily turn to the overcapacity thesis. After all, they are not going to live in a stationary economy after establishment of full employment. Full and even intensified continuation of dynamic forces with their attendant aspects of change and uncertainty, the tendencies toward the "bunching" of innovations along the lines of Schumpeterian thought, and the fact that increase of plant capacity normally cannot be secured in small continuous increments but necessitates certain jumps, do not make it likely that businessmen will readily agree to march always far ahead of prevailing demand schedules.

Ironically enough, Professor Hansen has overlooked a much simpler solution of the cost problem under securely established full-employment conditions. Assurance of a sustained demand should certainly influence the type of plants that businessmen will build. Therefore, they are likely to build for constant peak performance in the way suggested by Professor Stigler's previously quoted exposition and represented by marginal cost curves decreasing up to full capacity. This would obviously be a solution much preferable to that of maintaining vast overcapacity.

With regard to Professor Hansen's labor shortage argument, it is hard to imagine that the three circumstances which he seems to appraise as a sufficient remedy, could produce more than a very slight alleviating effect. The margin of flexibility represented by "turnover" unemployment appears to be more apparent than real. Bottlenecks resulting from a real shortage of labor relative to the vastly increased capacity of plant could certainly not be remedied in this way. How, secondly, growth factors in the labor supply which definitely represent a long-term phenomenon, should sufficiently influence short-run bottlenecks, is also not easy to comprehend. The final reference to possible improvements

in the technique of job classifications and wage structures carries only the claim that they would "tend to ease" bottleneck pressures. This limited claim one may grant.

III

The origin of Professor Eiteman's article, no doubt, lies also in the impact of the misinterpreted thesis of cost linearity "up to full capacity" that resulted from Professor Lester's apparently convincing investigation. Accepting these results without reservation, he has attempted to add a further explanation for this phenomenon. If, in conformity with the analysis of the first section of this paper, one doubts severely that its prevalence has been established at all, one may well feel that his effort cannot yield significant results. Yet, it certainly calls for consideration and appraisal.

Again, there is reason to start with an objection against procedure. In his attempt to pit the new doctrine against tradition, Professor Eiteman unnecessarily overstates the cleavage. His Figure 1, supposed to be "typical" in the sense that it portrays "practically all average cost curves used for illustrative purposes in textbook discussions,"[32] represents an extreme of which this writer has been unable to detect even a single example.[33]

The central suggestion offered by Professor Eiteman is to the effect that prevailingly linear cost functions at the extreme right of a cost curve result when an "engineer designed the plant so as to cause the variable factor to be used most efficiently when the plant is operated close to capacity."[34] Thus stated, the proposition is certainly true, but, so it seems, not new at all. Whenever a plant is built for performance at one and the same capacity level only, this excludes the necessity—and very likely the possibility also—for its adaptability to changing in-

[32] Eiteman, *op. cit.*, p. 910, first paragraph.

[33] In Figure 1 he draws a "Typical Cost Curve" with the least-cost-point at 35% of total capacity, and in Figure 2 an output curve with the point of highest returns to the input factor at 25% only. In fourteen of the most widely used textbooks, selected at random, this writer found cost curves with the least-cost-point in one case at 40%, in two at 80; the average was 64, the median and the mean 60. True, the *output curve* of Figure 2 is taken from one of these textbooks which, however, displays a *cost curve* with the least-cost-point at about 65%. It almost looks as if Professor Eiteman subconsciously introduced the output approach because he had not at hand a case of a cost curve portrayal with a sufficiently strict curvature, and then submitted to a process of rationalization. It is, of course, not strange to find output diagrams more easily than cost diagrams which show the unabated influence of "diminishing returns," because the former go often directly back to empirical findings related to agriculture, while the latter are meant to depict industrial conditions where the influence of diminishing returns is definitely more subdued. If one wants to establish the "typical" cost curve, thus ignoring all the mental reservations which every alert instructor probably makes when he draws such a curve on the blackboard, the least-cost-point would have to be shown at about two-thirds of the total range.

[34] *Ibid.*, p. 913.

puts. This case of "zero adaptability" has been presented by Stigler, and clarified by a diagram which shows in principle the same shape of a cost curve decreasing up to the point of highest capacity which would correspond to Eiteman's Figure 3.[35] Actually, what distinguishes Eiteman's suggestion from Stigler's is only a different evaluation of its practical significance. While Eiteman thinks that it relates to a prevailing phenomenon, Stigler states that it "is indeed unlikely that this case would ever arise in practice. . . ."[36]

It is, however, the specific conclusion which Professor Eiteman reaches and presents for acceptance that invites criticism. From the unquestionably correct assumption that a plant built for uniform peak performance must have been designed by an engineer, he develops, though clearly as a logical ***nonsequitur,*** the corollary that the most relevant dichotomy is between plants in which the "fixed factor was designed *by engineers*" . . . or "whether it was supplied *by nature*."[37] This, however, is a highly misleading proposition, because one might easily conclude that it is only a matter of hiring engineering talent to build those ideal plants with cost linearity up to peak capacity; while actually the real difficulty involved is the question posed to a businessman as to whether he would be better off with a plant built for uniform peak capacity or with a plant well adaptable to varying capacities. This will, on the part of the businessman, invite the same type of calculation related to profit maximization to which Stigler has referred in connection with the similar problem of deciding upon a wanted degree of flexibility.[38]

The proper dichotomy, therefore, may be suggested as follows: On one side there are plants largely influenced by natural conditions of "diminishing returns," and those built for fluctuating conditions of output. The latter, most suitable for our present cycle-affected economy, are, as a rule, certainly built by engineers. On the other side, there may exist special conditions favoring plants in which their "normal" capacity coincides with peak capacity—and these, of course, are *also* built by engineers!

[35] "Production and Distribution in the Short Run," *Jour. Pol. Econ.*, June, 1939, pp. 310, 313, 314, Fig. 2(A). The only difference in Stigler's diagram is that his plant shows the uniform and unadaptable position at a relatively low output level. It almost seems that this representation is somewhat inconsistent with the assumed condition, because the fact that marginal costs at this capacity become vertical makes it the point of peak capacity. It may be also noted that Eiteman, on p. 914, objects to this representation of the marginal cost situation. He says: "The truth of the matter is that the MC curve does not rise vertically at the point of capacity output: it ENDS there." This, for all practical purposes, is correct, but shows also that Eiteman interprets Stigler's diagram as implying the same case he makes.

[36] *Ibid.*, p. 310, (d).

[37] *Op. cit.*, p. 915 (italics in the text).

[38] *Op. cit.*, p. 316.

It may well be that Professor Eiteman—in 1947!—had more reason to point to the importance of the type of plant he has in mind, than Stigler had in 1939. War conditions with their call for constant peak performance and with no uncertainty about maintenance of demand, are, in contrast to the output fluctuations characteristic of peace conditions, exactly those in which the type of plant envisaged by Professor Eiteman had a proper place. But all that this proves is that under appropriate conditions such plants can be built, and not that engineering talent will be the solution to U-shaped marginal cost curves such as are likely to prevail in an economy subject to high fluctuations of output levels.

COMMUNICATIONS

Disinflation, Discrimination, and the Dollar Shortage

Two theses on the "dollar shortage," one relating to its cause and the other to its cure, have gained wide acceptance over the past year even though they emanate from quite different quarters. The former maintains that the balance-of-payments difficulties of many countries are largely due to domestic inflation, the latter that the principle of non-discrimination cannot be applied as long as the world remains short of dollars. The following article offers some comments on both theses.

I. *Inflation and Balance-of-Payments Deficit*

During the first two postwar years, the need for balance-of-payments assistance of European countries was generally explained in terms of the structural changes in the world economy which were brought about by World War II. The great need for reconstruction and the low level of production in Europe, the loss of invisible income from overseas, and the disruption of traditional trade relations of Western Europe with both Eastern Europe and the Far East—all these were held, and no doubt justly, to provide a sufficient explanation for the need of large-scale aid from the United States. When, however, in 1947, European recovery suffered a relapse, and balance-of-payments equilibrium seemed farther away than ever, "monetary" phenomena were given increasing weight at the expense of the "real" structural factors. The development of the terms of trade was widely discussed; devaluation was no longer entirely brushed aside as an untimely and blunt instrument; and the connection between domestic inflation and external imbalance was increasingly stressed. The latter, in particular, is the central theme of the latest annual report of the Bank for International Settlements which acknowledges that the economic policies of several European governments display an increasing awareness of this connection.

The causal link between inflation, whether open or repressed, and foreign exchange shortages is easily understood. In the case of open inflation, the rise in domestic prices soon makes it unprofitable to export and profitable to import as long as exchange rates remain pegged.[1] In the case of repressed inflation, the pressure of redundant internal purchasing power brings about a diversion of both factors of production and output from export industries to domestic nonpriority uses.

This reasoning is appealing inasmuch as it holds out the promise of a short-

[1] It may be noted that the existence of a fixed rate of exchange is a limitation on the "openness" of the inflation. During the ideally "open" German inflation of the 'twenties, there never developed a foreign exchange shortage, one reason being that the fall in the foreign value of the mark in general kept ahead of the increase in domestic prices.

cut to the solution of balance-of-payment difficulties: it clearly seems easier to "disinflate" or to stop an open inflationary process than to bring about basic readjustments of industrial structure and of trade patterns.

There certainly is a good deal of validity in the "monetary" explanations of the foreign exchange shortage, but it would be dangerous to rely on "disinflation" alone for securing external equilibrium. The relaxed tension of domestic demand, the greater availability of labor, and some scattered symptoms of depression, all of which have been noted over the past year in a number of European countries, are merely presenting these countries with an opportunity to carry out such readjustments in their productive structure as may help to render them eventually independent of foreign aid. If this opportunity is not seized, there will be either economic stagnation, offering no hope for ever emerging from the condition of external imbalance without a drastic reduction in the standard of living, or a growing public demand for indiscriminate "reflation," which would reproduce the situation prior to "disinflation."[2]

The need for caution in drawing conclusions from the connection between inflation and balance-of-payments deficit becomes even more apparent when it is realized that *the causal relationship runs both ways.* In the postwar situation, the need for foreign aid often became more imperative as a consequence of internal inflation; but, on the other hand, internal inflation was given a powerful stimulus by reconstruction and investment activities which in turn were rendered possible only by the large volume of raw material and equipment imports financed by U. S. grants or loans. No doubt these imports do eventually result in an increased flow of consumers' goods. In the short run, however, foreign aid shipments can exert, paradoxically, an inflationary effect on the recipient countries. This is true in particular when the net imports, because of their "bottleneck" nature, permit use of large quantities of hitherto unused domestic labor and raw materials in reconstruction and investment activities while individual savings are still at very low levels. In fully employed economies, additional investment resulting from "reconstruction imports" will attract already employed domestic factors of production and will therefore result in an upward pressure on wages and prices.

The effect described here may, of course, be accounted for, along traditional lines, by the juxtaposition of a deflationary effect deriving from net imports and of a larger inflationary effect deriving from domestic investment. But if this investment is made possible by the imports and would most likely not have been undertaken at all in their absence, our analysis gains in realism by an explicit recognition of this link. It may be pointed out that, similarly, United State net exports can have an anti-inflationary effect on the United States economy. For the shipment of raw materials and machinery abroad may result in the postponement of capital expansion projects which might otherwise have materialized; it also makes it impossible for these goods to compete for complementary and already otherwise employed factors of production (labor and materials) through which they would be put to use in the

[2] See on this problem in the United Kingdom, "Retreat from Austerity," *The Banker* (July, 1948), pp. 12-15.

American economy. This anti-inflationary effect of the United States net exports on the domestic economy is the logical counterpart to their inflationary effect on the foreign economies, but in the present situation the actual significance of the effect in the United States is no doubt far smaller than that abroad, and is certainly outweighed for the United States by the aggregate inflationary impact of our foreign aid program.

It would be tempting to classify the various categories of imports according to the inflationary or deflationary impact they are likely to have on the recipient economies, but generalizations in this respect cannot be carried very far. Imports of machine tools will not be inflationary if they are replacements rather than part of the installation of a new plant; imports of foodstuffs, on the other hand, may not have a deflationary effect if they release scarce labor resources which can be used in investment activities. In the present situation, however, the often used distinction between "relief" imports (which merely sustain output and standards of living at existing levels) and "recovery" imports (which permit an expansion in output) is relevant to our discussion. The former are likely to have prevalently a deflationary impact while the inflationary effect described above will ordinarily derive from the "recovery" imports.

In this connection, mention should also be made of the possible use of certain imports such as films and tobacco, which may best be described as "essential luxuries," in domestic monetary policy.[3] Since their demand is inelastic within a considerable range, while their prices do not have to be kept low for reasons of social tranquility, the imposition of heavy consumption taxes on these commodities will result in the mopping up of internal purchasing power to an extent far exceeding the local currency equivalent of their dollar value. Imports of such items are thus particularly well suited for the purposes of a disinflationary policy since their domestic impact is the exact opposite of that of the so-called "recovery items." It has been rightly pointed out that by their contribution to disinflation these imports may result, indirectly, in an actual saving of foreign exchange.[4]

The possible inflationary effect of certain categories of foreign aid shipments on the economies of the recipient countries creates a difficult problem of policy. To press for monetary stability on the one hand, and for inclusion of a maximum amount of "recovery items" in shipments financed through U.S. aid on the other, may mean advocating deflation and inflation at the same time. Should monetary stability be achieved primarily by a reduction in investment activity, the absorption of "recovery items" even on the scale which prevailed during the inflationary phase would become impossible. Such inability to absorb recovery imports[5] is a danger signal since it denotes

[3] This category overlaps, but is not identical, with that of the so-called "incentive" goods.

[4] Sir Hubert Henderson, "Cheap Money and the Budget," *Econ. Jour.*, Vol. LVII (Sept., 1947), p. 270.

[5] During Italy's recent deflationary experience, the Italian government has had considerable difficulties in disposing domestically of the full amount of coal it had imported under the various foreign aid programs.

economic stagnation and failure to proceed with the capital formation which is essential to the achievement of equilibrium in the long run. If disinflation is brought about and is maintained by a reduction in essential investment expenditures, the cure may be worse than the disease; if, on the contrary, it is caused by a curtailment of expenditures for nonessential investment and consumption, and if the resources thus released are gradually channeled into export industries and essential investments, disinflation can indeed make a considerable contribution to the economic rehabilitation of the areas now dependent on aid from the United States.

II. *Discrimination—A Remedy?*

In an interesting series of articles on "The World and the Dollar," the London *Economist* came recently once more to the conclusion that discrimination against American goods is an essential tool of commercial policy if Europe and the world are to achieve recovery and economic independence.[6] The "admirable doctrine" of nondiscrimination must be shelved, according to the author of the series, as long as the world does not have as many dollars as it would like to spend.

This thesis is in the process of becoming widely accepted. The United States made substantial concessions to it in agreeing to the "scarce currency" clause of the Bretton Woods Agreements on the International Monetary Fund and to Article 23 ("Exceptions to the Rule of Nondiscrimination") of the ITO Charter. The advocation of closer European union by the United States has been interpreted as the final admission that the "admirable doctrine" could not be maintained, let alone applied, in the present situation.

The examples cited to support the case for discrimination appear quite convincing at first sight. Why should Britain restrict the purchase of books from Australia and of tobacco from Kenya simply because the dollar shortage forces it to limit book and tobacco imports from the United States?[7] Why should Canada ban chocolate imports from France because the dollar shortage forces it to prohibit imports of American candy bars?[8] Why, in other words, should the restrictive effects of the dollar shortage be allowed to affect, and possibly paralyze, trade among the nondollar countries?

In reviewing this argument we shall not discuss here the general case for or against discrimination. We shall rather meet the argument on its own ground, *i.e.*, we shall examine only how likely it is that discrimination is an effective device in dealing with the dollar shortage. It is the contention of this note that a consistent policy of discrimination is likely to impede structural changes in trade patterns which are necessary for the overcoming of the present condition of imbalance in international economic relations. This may be made clear in the following manner:

1. Suppose that in the second example cited above, Switzerland (a more

[6] The *Economist*, June 26, 1948, pp. 1051-52; July 3, 1948, pp. 4-5; July 10, 1948, pp. 44-46.

[7] Thomas Balogh, "The Problem of the British Balance of Payments," *Bull. of the Oxford Institute of Statistics*, Vol. IX (July, 1947), p. 222.

[8] The *Economist*, July 10, 1948, p. 45.

likely source of chocolate imports for Canada) is substituted for France. Then, it will be seen immediately, the argument that it would be senseless for Canada to ban chocolate imports from Switzerland along with those from the United States does not hold any longer. For any export surplus that Canada is able to secure with Switzerland through a reduction in imports would be readily convertible into dollars and would *pro tanto* reduce Canada's dollar deficit.

2. Let us now return to the original example with France as the third country. A Canadian export surplus with France is not convertible into dollars and does not therefore make any immediate contribution to the easing of Canada's dollar position. But surely Canada will not indefinitely accumulate French francs. It will either be successful in pressing the French for imports more essential than chocolate, or it will have to make a determined attempt to redirect part of its exports from France to the United States. In both cases, its dollar position is likely to be improved.

3. But, it will be argued, Canada is not likely to achieve an export surplus at all as the result of its nondiscriminatory import cuts because France by pursuing the same policy will have reduced its purchases of, say, books from Canada along with those from the United States. The consequence of dollar shortage plus nondiscrimination is then the stifling of trade among France and Canada. This may well be true, but it may be asked whether the consequence of this particular reduction in mutual trade would not be beneficial in the longer run. For in both countries the reduction in intertrade results in certain commodity surpluses which it may be possible to redirect to the *Western Hemisphere;* and in case such redirection is impracticable, the resources released by the reduction in intertrade could be devoted to the production of goods which would find an outlet in the dollar area or which might replace goods previously imported from that area.

It is generally recognized that the solution of the "dollar problem" will require far-reaching readjustments of trade patterns and, in particular, an expansion of Europe's sales and a reduction of its purchases in the Western Hemisphere. But it is one thing to state this necessity and another to provide sufficient incentives and penalties to bring the readjustment about. If the whole burden of the readjustment is thrown on the bilateral relationships between the United States and the dollar-poor countries, while all other trade relationships are carefully insulated from the effect of the dollar shortage, the elasticity of the trading system and its capacity for readjustment are greatly reduced. It is a fallacy to assume that because currencies are largely inconvertible, no multilateral adjustment of a given bilateral trade relationship in disequilibrium is possible at all. This adjustment is merely more laborious than under conditions of currency convertibility since it requires the reshuffling of exports and of resources. Especially under conditions of full employment, it is hard to see how equilibrium can at all be re-established without such reshuffling.

The preceding argument may be considered from a somewhat different angle: Suppose that there are excellent opportunities for mutually beneficial and balanced trade between two countries which cannot be taken advantage

of because of the rule of nondiscrimination, both countries being unable to afford buying from the United States the goods which they want to buy from each other. As long as it is impossible to shift resources, a strong argument may be made for a discriminatory policy. Such instances should, however, be justified on an *ad hoc* basis rather than be sanctioned in advance by the principle of discrimination against U.S. goods. If this principle were applied systematically and all non-U.S. trade were to proceed on an artificially sheltered basis, the result would indeed be a growth of that trade, possibly even on a balanced basis, while the dollar problem would likely remain as critical as ever. Such a situation would, of course, provide the dollar-short countries with an excellent opportunity for pointing out that since they have achieved growing and balanced trade with all countries except the United States, the fault must obviously lie with the United States which "does not make enough dollars available," "does not behave like a mature creditor country," etc., and has therefore to take the responsibility for the shortage by providing further loans and grants.

It is not intimated here that discrimination is being advocated with this design in mind. The partisans of discrimination live much more in the past than in future. The origin of the doctrine is the experience of the 'thirties when it would have been most important to isolate as much as possible the effect of the sudden halving of American imports of goods and services. Rather than to permit the propagation of the depression by deflation, devaluation or nondiscriminatory import cuts, it has been pointed out that the countries affected by a depression starting in another area ought to take domestic compensatory measures combined with discriminatory exchange controls.[9] Today, however, the problem is not to circumscribe and to offset the effects of an American depression, but to let the dollar shortage have its full effect in producing a diversion of exports to hard currency areas, and in general to shake loose and readjust old and new trade patterns so as to permit a progressive reduction in U.S. foreign aid shipments. The advocates of systematic discrimination are fighting the last war, and if they win out, the present war against the dollar shortage may well be lost.

The preceding argument stresses the dangers of a policy based on the belief that the scarcity of dollars makes a systematic policy of discrimination necessary. In itself, however, the opposite policy is certainly not sufficient to make a contribution to the cure of the dollar shortage. The effect of nondiscrimination on trade may be roughly compared to the effect of disinflation on production: By freeing resources, both make possible their redirection into patterns which will reduce the dependence of Europe on outside aid. The actual implementation of this redirection is a task which requires a far greater flexibility and readiness to make adjustments than has been displayed hitherto by most European economies. The strongest economic argument

[9] Robert Triffin, *National Central Banking and the International Economy*, Postwar Econ. Stud. No. 7, Board of Governors, Federal Reserve System, *passim*. That the origin of the doctrine of discrimination lies in the preoccupation with a depression induced by a foreign country appears quite clearly from the League of Nations report, *Economic Stability in the Postwar World* (1945) pp. 245-47, quoted by Triffin.

for a more intimate European union lies in the expectation that it would help to remove many of the obstacles which have been blocking progress in this direction.

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Inflation and Equality

A conscientious effort to cover *every* aspect of a problem may sometimes be in a measure self-defeating. Anyone who reads the symposium on inflation of ten leading economists in the *Review of Economics and Statistics* for February 1948 cannot fail to be impressed with its thoroughness, its scope, and its fair-mindedness. Yet because of the very meticulousness with which an attempt is made to cover the whole field, resulting impressions are somewhat blurred. There is, in particular, one vital question the impact of which is obscured and which is left largely to implication. I refer to the relation between inflation and the distribution, or rather redistribution, of wealth. Here is a point at which all the most important ideological and social currents of the modern world meet in fateful flow.

The ten participants are in notable agreement on the immediate facts. All concede that we are, for the present, in a capital-hungry world. The memory of secular stagnation troubles Dr. Boulding somewhat, but the other contributors say very little on the subject. While the writer does not wish to beg a vital question, space is lacking in this brief communication for an extended factual argument. We shall here assume (with, however, the tacit support, as it seems to me, of most of the participants) that this state of capital hunger is likely to endure—long enough, indeed, for us to begin to treat the *secular* problem as inflation rather than the reverse. If more definite statement is demanded, I should say about 25 years. Basis for such an outlook is found in the following considerations: (1) a straight line *long run* trend in consumption paralleling output, if anything proportionately higher in future; (2) immense increase in public demand for government-provided welfare services requiring a great deal of capital; (3) general determination of backward countries to industrialize as quickly as possible and probable willingness of Americans to help finance the process. These alone, I believe, could account for long run upward pressure. Add to them the threat of war, and the prospect of secular upward price trends seems overwhelming.

Such a point of view does not deny the possibility of short-run depression. But any such stoppages (as Dr. Mills' essay rather clearly shows) are more likely to be the product of cost-price maladjustment; or "over"-investment; or may even conceivably be of an "Austrian" character—that is the type of disturbance analyzed by Lionel Robbins, Hayek, and more recently by J. R. Hicks, in which the crisis is induced by *too much* purchasing power; rather than the products of Keynesian under-consumption.[1] Only well-nigh incredibly

[1] J. R. Hicks, "World Recovery After War—A Theoretical Analysis," *Econ. Jour.* (June, 1947); F. A. Hayek, *Prices and Production* (London, 1932); Lionel Robbins, *The Great Depression* (London, 1934).

stupid, or revolutionary, policy, I submit, could turn such a depression into secular stagnation.[2] This means we should treat it as a problem of "filling in" or temporary discontinuity in investment flow rather than secular underconsumption.

We start, then, with the premise that all over the world today, and even in our own country, the masses of mankind are striving for and demanding a standard of living which our present equipment is inadequate to furnish. The present paper proposes to consider the ethico-political choices presented to modern society by this dilemma.

I

The economic task today is often spoken of as "preventing inflation." It is submitted that this puts the emphasis in the wrong place. The *basic* peacetime task, it seems to me, is *raising the standard of living,* or if we are to be at war, getting the needed war equipment; or, if it were possible, doing both. The implied difference in emphasis is not a minor one. For peacetime policy it means the difference between taking "welfare" as our major guide or merely price-level stabilization. The latter can be managed, officially anyhow, largely by controls, but the former is more complicated. If we merely take preventing inflation (price rise?) as our sole criterion then one can agree with Dr. Harris and Mr. Lerner that investment has been running "far too high." But if raising the standard of living, or rearmament, is to be our prime goal, then we are well justified in asking how, if investment is not to run high, the basic problem is ever to be met? I submit therefore that our task is, indeed, to prevent inflation, but to prevent it in such a way as to permit a high rate of investment.

Here is the rub. Mr. Lerner states the issue with admirable honesty and clarity: "The more important part of the solution lies . . . in reducing the rate or flow of spending. The simplest way to make people spend less is to take away from them the money that you want them not to spend. . . .

"*We cannot bring about any substantial reduction in total spending by taxing only the very rich,* and we do not want to reduce the spending by the

---

I must not be understood as adopting Professor Hayek's cycle theory either in full or exclusively, especially as far as *necessarily* dire effects from increasing M are concerned. But a depression, it seems to me, is like a broken leg—you can get it in any number of ways. All I am trying to say is that depression may (sometimes) come because the propensity to consume is too high and/or the interest rate too low so that the capital projects undertaken cannot be completed for lack of adequate real saving. Alternatively, even when monetary demand is very high, cost-price relationships may be such as not to furnish adequate incentive. These two cases cannot easily be handled by the usual Keynesian model, but this does not mean that it, in turn, will not also have its periods of applicability. Finally, there is a possibility of crisis in the investment industries due to varying rate of acceleration, even when general demand is still rising. For further statement on all these points, see D. McC. Wright, *The Economics of Disturbance* (New York, 1947).

[2] For a summary of some the more likely species of policy mistake which might stop the economy, see D. McC. Wright, *Democracy and Progress* (New York, 1948), Chap. XI, "Three Plans." Let me stress again that I am dealing in this communication with the *secular* problem. Should events so transpire that there is some depression at the time this article appears, it still will not affect my long-run prognosis. As to policy, under such circumstances, see the chapter cited above.

very poor on the necessities of life. The additional taxation must therefore fall, for the most part, *on the ordinary citizen*" (italics supplied).

In other words if we want to prevent inflation, and still more, if we want to prevent inflation *and* get investment, we must reverse all our ideas of taxation, so painfully built up during the last twelve years, and tax consumption! This means a notably less progressive tax structure.

II

The writer finds that it is possible, though with intense difficulty, to get many modern economists this far in the argument. Our ideas of the "economy of abundance" die hard, but for the honest social scientist the facts are overwhelming. There is, however, a far more serious problem to be faced.

If we are going back to war, or semi-war, there will be little problem concerning investment. Most of it will be handled by the government, and when not handled directly, it will be done under close government control. But what of a rise in civilian goods? Who will manage that?

"Postwar planning" now (and so soon again!) may seem a little remote. Yet even if the present peace should be a delusion, clarity of reasoning and indeed of policy, requires us to look forward to a possible day in which, war being over a while anyhow, we find ourselves once more flooded with money, and again resuming the real task of raising the living standards of the world. What tax policy shall we use then?

Can there be any doubt as to the policy to which the functional logic of the Keynesian system leads? Have we not spent twelve years proving that we must soak the rich because they "save too much"? And do we not now want saving? I have said that it is possible to get some intellectuals to admit the need for taxing consumption—which is tantamount to saying taxing the less well-to-do. But when one speaks of lowering taxes on the upper-income brackets in order to get more saving and more investment, then, indeed, controversy begins. The clearest and most honest statement of the problem that I have heard was made by a young economist who said that he would "rather have inflation than do anything to allow income distribution to move toward its former (more unequal) pattern." In other words, what was to him a moral standard was more important than the economic one.

Let us, however, think a bit. For the man who is an avowed socialist, there is no problem. *Government* will tax consumption, and *government* investment in plant for the production of consumers' goods will raise (it is said) the standard of living. The fact that such a policy will create an ever-growing field of government industry beside the "private" one is no objection. Indeed it is an advantage. My questions are aimed more at those who claim to "believe" in "capitalism," and who profess to wish to help the condition of the poor, but who refuse to allow inequality of income and private capital accumulation on the ground that it is "unethical." Their policy can only mean one of two things (a) the poor will not get the increased living standards they wish—or get them very slowly, or (b) the economy will gradually be socialized. If any one can point out an escape from this dilemma, under the circumstances postulated, I shall be happy to hear it. Furthermore, whether

the second policy will actually give more consumers' goods depends on one's estimate of the effectiveness of government investment.

A similar problem is raised by the problem of profits. We want to encourage people to invest in order that the standard of living can be increased. In war, again, there is little problem. If special obsolescence rates are permitted, the net profit rate (after taxes) can be kept very low (unless we want to allow higher profits to produce more saving). Intra-marginal rents are a problem, but they can be handled by price control plus subsidies to the marginal firms. The stimulus of patriotism is perhaps adequate.

But again, in peacetime the case is different. Risks today are exceedingly high. The steel industry, for example, is afraid (and with some *prima facie* reason) of the consequences to itself of "back log" saturation. Is a rate of return of ten or twelve per cent under such circumstances (and with tremendous marginal construction costs) adequate to induce the great increase in output we desperately need? If we encourage an uncritical ethical jealousy of profit, can we blame the private economy for not functioning?[3]

Finally there is the interest rate. We want to encourage people to save as much as possible. Certainly low interest rates do not help there. We also want to encourage investment. We have just said that risky new investment is severely hampered by present policies. Even so, there is an attempt to invest more than our present relatively limited rate of voluntary saving. Supposing that we do all we can to discourage consumption, the probabilities are that the secular need for current new investment would still be greater than the saving flow. Only if we deliberately attempt to discourage investment incentives would the case be different. Up to now our discouragement of new investment has not affected the rate of planned investment quite that much.

Under such circumstances, as Colin Clarke points out in his *Economics of 1960*, capital scarcity confronts us with two main approaches toward stabilization. We can (a) ration capital—*i.e.*, plan the flow of net new investment, or (b) raise the interest rate. The third (and more likely) possibility is of course to permit continuing inflation.

There is one point which must still be treated. Some will say that we have no guarantee that the more well-to-do will save if taxes on the upper-income brackets are reduced. The case of the unfortunate family mentioned in *Fortune* who were barely "getting along" on $25,000 a year is frequently brought up to me.

For myself I confess to a certain skepticism as to how typical a case this is, but let that pass. Professor Slichter has furnished the answer. Let us give tax exemptions on *saved* income. It is not necessary at present to distinguish between saving and hoarding, for even hoards help to reduce the pressure on prices.

[3] In view of the number of sweeping statements now made regarding "huge" profits, it may be worthwhile to offer some figures drawn from the *Economic Report of the President* for January 1948. In 1929, profits *before* taxes were 9% of gross national product, 11% of national income. In 1947 they were 12% and 13%. This shows some relative gain. But in 1929 profits *after* taxes were 8% of gross national product or 9% of national income. Today they are 7% and 8%. Thus the *net* relative profit share has actually declined.

But again we are up against equalitarian prejudice. Slichter's plan does in the first instance obviously help the well-to-do more than the poor. Therefore it will be bound to arouse opposition.

Thus we see that the world inflationary crisis is not merely an economic but an ethico-political one. Some will say that for the United States the case is different. But for myself I believe that we are involved in a net of political as well as economic circumstances which will create for the United States as well as for the rest of the world, a secular inflationary problem.[4] In summary, if those who so loudly proclaim their loyalty to the "free enterprise" system really believe in it (or any real approach to it), does not our present condition call for (1) less taxation of profits, (2) less progressive taxation, (3) higher interest rates? And in any event and under any system does it not call for less consumption?

In evaluating extreme applications of Keynesian doctrine, it is always worthwhile to refer to Lord Keynes himself. The following, taken from the *General Theory,* is especially suggestive: "It may turn out that the propensity to consume will be so easily strengthened by the effects of a falling rate of interest, that full employment can be reached with a rate of accumulation little greater than at present. In this event a scheme for the higher taxation of large incomes and inheritances might be open to the objection that it would lead to full employment with a rate of accumulation which was reduced considerably below the current level. *I must not be supposed to deny the possibility or even the probability of this outcome*"[5] (italics supplied).

III

Sometimes I hear doubts expressed concerning the far-sightedness of the general public. But what a role are we economists playing! Professor Boulding in his *Economics of Peace,* written, to be sure, several years ago, implies that our society *must* be more or less equalitarian or experience unemployment.[6] Professor Tarshis manages to write an elementary text very nearly without mentioning the role of saving in producing real capital; Professor Samuelson in his much more balanced text recognizes the problem, but his major fear seems deflation, and the role of saver receives considerable ridicule.[7]

Our problem is that the masses will neither save for themselves, nor allow

[4] Wright, *Democracy and Progress,* Chap. X, "Economic Isolation and the Capitalist Future."

[5] J. M. Keynes, *The General Theory of Employment Interest and Money* (New York, 1936), p. 377.

[6] K. E. Boulding, *The Economics of Peace* (New York, 1945), p. 111. But see also pp. 121-22.

[7] Both Professor Tarshis and Professor Samuelson are too well trained to omit entirely the role of saving. See, for example, Lorie Tarshis, *The Elements of Economics* (New York, 1945), pp. 490, 491; Paul A. Samuelson, *Economics, an Introductory Volume* (New York, 1948), pp. 44, 255, 423. Nevertheless, I believe my statement to be a fair description of the general color of their argument—for example, Tarshis p. 366, and Samuelson pp. 209, 213, 270, 272, especially the last. These citations are not intended to be exhaustive for either book.

others to do it, and that many of our intellectual leaders are encouraging them in this attitude. Yet they want higher living standards.

We cannot here argue the ethical and political aspects of the case. The writer has elsewhere treated them in detail.[8] But is inequality of wealth any worse than inequality of power? Does not redistribution often *increase* inequality of opportunity? Are the communist or fascist means of getting saving so much preferable to our own—even ethically? Will socialist saving-investment really prove more efficient? It must not be supposed that the writer has easily come to conclusions so different from his earlier beliefs. But having come to these conclusions, I feel a duty to state them "in the conviction which has grown with my growth and strengthened with my strength, that there is no alleviation for the sufferings of mankind except veracity of thought and action, and the resolute facing of the world as it is when the garment of make-believe by which pious hands have hidden its uglier features is stripped off."[9]

The "pious hands" to which T. H. Huxley, from whom I quote, alluded were those of a narrow and sectarian religion. But the sincere scientist may well apply his words to the pious hands of sectarian economics.

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[8] Wright, *Democracy and Progress; Economics of Disturbance.*

[9] Thomas Henry Huxley, *Autobiography.*

Mr. Boulding's Criticism of the Net National Product Concept

In the March 1948 issue of this *Review*,[1] Mr. Boulding wrote that the concept of the net national product leads to absurdities and should be avoided by those expounding a theory of employment. His argument, as it originally appeared, was based on a misunderstanding of the currently used concept of net national product. He wrote (pp. 101-102):

> The "net" national product is usually defined as the gross product less "depreciation"—depreciation being usually confined to plant and machinery. But depreciation is merely one form of consumption: and if we subtract one part of consumption (depreciation of industrial fixed capital), why not subtract depreciation of consumers capital, of houses, automobiles, etc.? And is there any logical difference between consumption which is spread out over a life-period of a commodity (depreciation) and the consumption of one-use goods such as fuel and foodstuffs? It would seem, therefore, that any attempt to define a net product by subtracting "depreciation" from a gross product will land us logically in a definition which makes the net product equal to the gross product less all consumption—which is to make the net product equal to accumulation, in which case a stationary society, however rich, would have no net product!

Thus Mr. Boulding argues that while the concept of gross national product is meaningful, the attempt to subtract out certain commodities used up

[1] Kenneth E. Boulding, "Professor Tarshis and the State of Economics," *Am. Econ. Rev.*, Vol. XXXVIII, No. 1 (Mar., 1948), pp. 92-102.

in the process of production is not meaningful. Actually, what Mr. Boulding defined in the above quotation is the concept of net national investment, and it should occasion no surprise to learn that a stationary society had no net national investment.

Contrary to the belief expressed in the quotation, there is a logical reason to subtract depreciation on plant and machinery only from gross national product in order to obtain net national product. The currently used definition of net national product flows directly from the notion of a gross national product. In order to obtain it, one subtracts depreciation on capital equipment from gross national product because part of the existing equipment is used up in the process of production. Hence, it is subtracted out to avoid double counting, *i.e.*, counting once the consumer goods produced, and then again counting the capital equipment used up in producing the consumer goods. Depreciation on consumer durables is not subtracted out because consumer durables are treated, as a matter of convenience in computing the statistic, as being consumed in the same period in which they are produced, *i.e.*, they are already net. Consumer non-durables are not subtracted out, of course, because they are one of the elements we desire to measure. If gross national product is meaningful, by the same token net national product is also meaningful.

In the note below, Mr. Boulding maintains his objection to the net national product on the grounds that some depreciation of capital is a function of time but not of the quantity produced. Here, he believes that time-depreciation should not be subtracted out to arrive at net national product. However, granting that some depreciation is independent of the quantity of goods produced but is dependent on a time interval, Mr. Boulding should agree to subtracting the time-depreciation which occurred over the period in which national product was being measured.

I therefore believe that Mr. Boulding's attempt to define a most significant concept of net national product as "excess of gross product over its 'fixed cost'—*i.e.*, over the consumption which would take place at zero output" is not meaningful because it neglects the fact that the national product is measured over a time interval during which time-depreciation occurs. Mr. Boulding's second concept of national surplus as "the excess of the gross product over that consumption which is necessarily involved in its production" is not helpful because the terms in the definition are not defined. This latter concept would be measurable, and hence meaningful, only if we could first decide what plane of living would be necessary for the purpose of production.

The usually cited deficiency in the net national product figure as published by the Department of Commerce is the lack of good statistics on depreciation. I do not, however, detect a conceptual error in arriving at this figure once gross national product is given, and I have tried to show that the two suggestions made by Mr. Boulding were not conceptual improvements.

MONROE BURK*

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Comment on Mr. Burk's Note

Mr. Burk has detected a definite error in my article, and I am grateful for the opportunity to correct it. It is quite true that the net national product concept is an attempt to avoid "double counting" in the computation of national income. Just as we should not count both the wheat and the flour made from it in the national product, so it is argued we should not count both the consumption of the flour mill and the flour. Where production consists of asset transformation, clearly the "net" output consists of assets produced less their "cost" in the sense of assets used up in making them.

There is, however, still some difficulty in the "net national product" concept. Depreciation may be in large part a "fixed cost." That is to say, the flour mill may depreciate whether it is used or not: in that way it differs from the wheat, which still remains as an asset whether it happens to be made into flour or not. That is to say, there is some consumption which is a "variable cost"—or "user cost," to use Keynes' term—which would not have taken place had there not been production, and some which is a "fixed cost," which would take place whether there was production or not. It is clear that the fixed cost (depreciation) is not a "cost of production" but merely a "cost of existence." It is the gross product, therefore, which is the best measure of output. This can be seen clearly if we reflect that at a zero level of employment, the gross product will be zero but the net product will be negative. Assuming constant efficiency of labor, gross product will rise proportionately with employment: net product will not. In this sense the most significant concept of net product is the excess of gross product over its "fixed cost"—*i.e.,* over the consumption which would take place at zero output. Another significant concept might be described as the "national surplus"—*i.e.*, the excess of the gross product over that consumption which is necessarily involved in its production. The proportion of its resources which a nation could devote to a total war effort, for instance, would be a measure of the "national surplus." This, however, is very far from the "net national product" of the Department of Commerce.

K. E. Boulding

The Least Cost Point, Capacity, and Marginal Analysis: A Rejoinder

The December 1947 issue of the *American Economic Review* contained an eight-page communication describing the factors that determine the location of the least cost point.[1] The September 1948 issue of the *Review* carried two critical comments on this paper.[2]

In the original article I argued that a "unit of input is not a single factor,"

[1] W. J. Eiteman, "Factors Determining the Location of the Least Cost Point," *Am. Econ. Rev.*, Vol. XXXVII, No. 5 (Dec., 1947), pp. 910-18.

[2] Robert L. Bishop, "Cost Discontinuities, Declining Costs, and Marginal Analysis," *Am. Econ. Rev.*, Vol. XXXVIII, No. 4 (Sept., 1948), pp. 607-17 and Walter W. Haines, "Capacity Production and the Least Cost Point," *ibid.*, pp. 617-24.

as economists are prone to assume, "but is, instead, a combination of forces. Consequently the change in total output that results from the application of an additional unit of input factor is a summation of the net effect of the component forces included in the input "unit." As pointed out, some of these forces tend toward increased output and some have an opposite tendency. From which it follows logically that "when production is carried on in quarters designed for the purpose, those in control will take into consideration all of the relationships involved and strive by careful planning to prevent any one of the component forces from decreasing efficiency until operations are close to capacity."

Mr. Bishop and Mr. Haines do not find fault with this thesis but they are alarmed at its implications for marginal analysis. For example, if modern engineers can make the least cost point fall at capacity output, then marginal cost curves will lie below average cost curves at all points of operation short of capacity. As a consequence, marginal cost curves will no longer intersect marginal revenue curves (1) when average revenue curves are horizontal or (2) when average revenue curves are high and almost horizontal. Under either of these conditions, business managers would simply produce as much goods as the current market would absorb without reference to marginal cost and marginal revenue. The case for marginal analysis would still be saved, however, if it could be proved that marginal cost curves rise vertically at capacity or that beyond-capacity production is possible. In a nutshell this is what Messrs. Bishop and Haines argue in their recent communication, although they also bring up a number of other points which must be considered.

Reply to Mr. Bishop

To begin with, Mr. Bishop objects to my saying that marginal cost is the "cost of an additional unit of output." He prefers to define marginal cost as "the slope of the total cost curve" or as "the rate at which total cost changes for infinitely small changes of output in either direction." I see no objections to Mr. Bishop's definition providing certain limitations in its application are recognized. *Mathematically* an "infinitely small change in output" could indicate a change of a fraction of a product whereas practical considerations would oppose having an "infinitely small change in output" refer to any quantity less than *one* product. Thus when a continuous curve is assumed, *marginal cost is the cost of one product* even though it also happens to be a mathematical measure of the slope of the total cost curve.[3] This raises the question of which of the two definitions offers the more useful tool for analysis. The purpose of price and equilibrium theory should be to explain how businessmen set prices and determine outputs under various assumed conditions. It is within the realm of possibility that a businessman might

[3] If production cannot be expanded one product at a time, then the concept of average marginal cost should be substituted for marginal cost.

compare the additional cost of producing one more product with the additional revenue to be obtained from its sale. It is not likely that businessmen make decisions as to prices and output on the basis of mathematical measures of the slopes of cost and revenue curves.[4]

Mr. Bishop also points out that MR = MC is not a necessary condition for profit maximization and suggests that "profit is maximized at a certain output when MR > MC at immediately lower outputs and when MR < MC at immediately higher outputs." Admittedly this is the more precise statement of the rule, particularly when discontinuous curves are assumed. However, when continuous curves are assumed, both rules lead to an identical solution.

Mr. Bishop disagrees with my statement that the MC curve ends at absolute capacity. As pointed out above, when continuous curves are used, marginal cost is identical with the additional cost of one more product. If production is at absolute capacity,[5] one more product is impossible. There can be no "cost" of an impossible product. Mr. Bishop suggests that the marginal curve be drawn vertical at absolute capacity for "purely heuristic" reasons. Webster's dictionary defines "heuristic" as pertaining to methods of demonstration that are persuasive rather than compellingly logical.[6]

Mr. Bishop also feels that my statement that cost reaches its minimum "at *or near* capacity" is a devastating admission for if it is once admitted that a variable unit cost reaches its minimum short of capacity and then rises, marginal cost exceeds variable unit cost over the range where the latter is rising and profit maximization by the conventional intersection of MR and MC is possible. But he goes on in the next paragraph to admit that if the variable unit cost at capacity only slightly exceeds the least cost point, the conventional intersection of MC and MR occurs only by virtue of the fact that the MC curve rises vertically at capacity to infinity. In other words, he believes that in such cases entrepreneurs choose to operate at capacity because the cost of a non-producible product (one beyond capacity) is infinitely higher than the revenue that would be obtained from the sale of such a non-existent product. The proposition refutes itself.

[4] The limits to the use of arithmetic and geometry in economic analysis should be dictated by the nature of the economic data and not by the mathematical technic of the economist. For a discussion of some of these limitations the reader is referred to W. E. Paulson, "Diagrammatic Economics," *Journal of Farm Economics*, August, 1946, and to "Miniature Diagrammatics" by the same author in the *Journal of Farm Economics*, August, 1948.

[5] The problem of whether beyond-capacity production is possible is treated later.

[6] In theory a line or curve never ends but continues to infinity. Thus a line or curve on a graph is only a segment of a theoretical line or curve. If such a segment curves upward to the right, it represents the ratio of an abstract up-force to an abstract side-force. Mathematically abstract forces go on indefinitely. When curves are used to depict concrete economic data, they do not necessarily possess all of their *mathematical* characteristics. An economic curve represents economic data and must be presumed to end when the data end. Thus if ten products are possible but the eleventh impossible, the cost of the eleventh is not infinity, it is nonexistent. Infinity implies existence beyond the realm of human measurement.

Reply to Mr. Haines

Mr. Haines in his communication points out that my "whole conclusion hinges on the assumption that capacity is an absolute and determinable quantity at which there is an immovable barrier against any further production at any cost." In this he is correct. He also charges me with failing to *indicate* clearly which definition of capacity I had in mind. A re-reading of my paper suggests that I am guilty of neglect in this matter. To remedy my neglect, he catalogs three possible definitions of capacity and then very charitably assumes that I probably had in mind the most sensible of the three. On this assumption he proceeds to demolish my theory. Unfortunately, however, his inventory omits a fourth definition which is the only one that is entirely acceptable.

Capacity must be distinguished from maximum output. Mr. Haines's definition fails to do this. Maximum output is a concept having two dimensions, time and a rate of production. Capacity is only one of the numerous possible rates of production—it happens to be the maximum rate. Capacity, by itself, is a timeless concept. Thus it would be appropriate to say that a plant was producing at capacity at a given moment even though its output for that day might well be less than its output for the preceding day.[7]

It is difficult to deal with a timeless-rate of production, yet if capacity is stated as the maximum output for a period of time (such as a day, a week, or a month), variations in ordinary time periods lend vagueness to the concept. An eight-hour day is not the same as a ten-hour day; no week has exactly the same number of working days in it as every other week, and so on. But all such obstacles are circumvented when the rate of production is placed on an hourly basis for (after the warming-up hour) one hour is identical with every other hour. Thus capacity should be defined as the maximum hourly output possible under normal circumstances. So defined, beyond-capacity output becomes impossible.

An average variable cost curve indicates the unit cost of producing goods at all scales of operation from the minimum rate practical to the maximum rate possible. The actual scale of operation shifts from one point on this curve to another by adding or subtracting input units. The curve assumes the cost of the input factors to remain constant. The *shape* of an average cost curve is determined by the efficiency of each added (or subtracted) input unit. The shape is not affected by the time element. The *altitude* of an average cost curve is determined by the cost of the input factor and is affected by the time element. When a plant is operated the customary number of hours each day, it will pay the market rate of wages. If it operates ten hours instead of eight, it may have to pay time-and-a-half for the extra two hours. This is the equivalent of a ten per cent rise in the hourly rate of pay and will cause the average cost curve to shift to a higher level without altering its

[7] This would be true, for example, if the output for Saturday (a four-hour day) was compared to the output for Friday (an eight-hour day) when the plant was operating at capacity-rate on Saturday and at 65 per cent of capacity-rate on Friday.

shape.[8] If the least cost point for an eight-hour day lies at, say, 85 per cent of capacity, the least cost point of a ten-hour day also lies at 85 per cent of capacity. The increase in unit cost that arises from overtime work is due to the change in the average cost of the variable factor and not to changes in the efficiency of the input factor.

When the least cost point is "at or near capacity," a manager will naturally prefer to operate at capacity but he may be prevented from doing so by the rate at which goods are flowing through the channels of distribution to consumers. To illustrate, assume that seven laborers in a small plant can produce 700 products per hour but that ten laborers in this plant can produce 1200 products per hour. If labor is paid 84 cents an hour, average cost will be 84 cents when seven laborers are employed and 70 cents when ten laborers are employed. If the current demand (at the price printed in catalogs) is for 28,000 products a week, a manager would prefer to operate the plant at its capacity rate for 23 hours and 20 minutes a week, but since his laborers will object to such a short work-week he will find it more practical to lay off three men and to work the remaining seven men 40 hours a week.

If demand temporarily exceeds 48,000 products a week, a manager will resort to overtime not because marginal revenue exceeds marginal costs but because his backlog of orders makes overtime necessary. If a manager expects demand to continue to exceed 48,000 products a week, he will operate his plant at capacity overtime until an addition to the plant can be constructed, after which he will again operate in accordance to the principles laid down in the preceding paragraph. In making such decisions, businessmen do not construct marginal revenue and marginal cost curves nor do they operate at a scale of operation that such curves would indicate if they were drawn.

In passing, Mr. Haines accuses me of misstating Bowman and Bach in my Figure 2. My article was not an attack upon Bowman and Bach. Rather, in the early part of my paper I asserted that the graphs found in most textbooks are based upon "an assumption that the plant in which production occurs is designed in such a way as to cause the variable factor to be used most efficiently when output is relatively small." For purposes of illustration, I took a curve from a textbook which happened to be Bowman and Bach's *Economic Analysis*. To make certain that there would be no misunderstanding, I took pains to state that the "solid line" of Figure 2 was taken from a "widely used and well-known textbook" (as a matter of fact the dotted line was also taken from the same source). I added the "capacity line" at the point where Bowman and Bach's marginal product curve became zero. This was done, not to misstate them (although I believe that they would agree that a plant has reached its capacity output when its marginal product is zero), but merely to facilitate comparison with a different type of average and marginal product curve, *i.e.*, the curves shown in Figure 3. Obviously, I did not succeed in misstating Bowman and Bach, if that was my object, for Mr. Haines was able to deduce correctly what I had done.

[8] A dollar an hour for eight hours plus three dollars for two additional hours is the equivalent of paying $1.10 per hour for ten hours.

Whether the least cost point falls at 35 per cent or at 73 per cent of capacity (in products) is of no importance to the discussion of pages 912 and 913 where the curves are displayed. The only point made on *these two pages* is that theorists are left with a choice of two assumptions: they may assume, if they wish, a curve similar to that shown in Figure 2 or one similar to that shown in Figure 3.

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BOOK REVIEWS

Economic Theory; General Works

Foundations of Economic Analysis. By PAUL ANTHONY SAMUELSON. (Cambridge: Harvard Univ. Press. 1947. Pp. xii, 447. $7.50.)

This is the first major work in price theory to appear since the end of the war, and there is no doubt that it will rank with Hicks' *Value and Capital* as one of the most important modern contributions to this increasingly complicated subject. The book, as its title indicates, is a study of the *foundations* of economic method, but it is by no means a book on methodology in the customary sense. It is methodological only in the sense that the author is more interested in illustrating a means of solving economic problems than in developing a complete and self-contained theory of the working of the economic system; in general, the book contains a much higher proportion of substantive economics than traditional books dealing with economic method. A large part of the economic content, however, is illustrative material and is not intended as an exhaustive discussion of the particular problem. Although it deals primarily with price theory, the book also contains illustrations from such different fields as taxation, international trade, business cycles, money and banking, and the theory of employment.

Lest this diversity of subjects should create a false impression, I hasten to add that it is the author's contention, well demonstrated in the book, that all of the various branches of economic analysis are unified by a small number of basic principles. From this point of view, the theory of international trade, or the theory of taxation, emerges as a special application of these basic principles to a particular set of problems. To be more specific, it is Samuelson's contention that all useful theorems in economics can be developed from two hypotheses. The first is the hypothesis that the equilibrium position of prices, quantities, etc., represents a maximum position for some magnitude such as utility or profits. If this is true, the characteristics of the economic system can be developed from the secondary conditions for a maximum. From the hypothesis that a producer is maximizing his profits, for example, it may be possible to predict how an increase in the price of a particular factor of production will influence the amount of that factor employed by a given firm.

Problems such as this constitute by far the largest part of traditional price theory. In Samuelson's book, however, they occupy only slightly more than half of the total pages. It is Samuelson's contention that most of the important economic problems, including practically all of those which deal with the economic system as a whole, cannot be reduced to simple problems of maximization. In other words, it would be difficult or impossible in most instances to show that the equilibrium of price and quantities for the economy as a whole represents a maximum position for some variable in the system.

In view of this limitation, Samuelson proposes a second hypothesis from which useful theorems can be derived, namely the hypothesis that an equilibrium position represents a *stable* situation in the sense that slight deviations of the variables from their equilibrium values tend to be self-corrective. In the second part of his book he shows that the characteristics of a static equilibrium can frequently be derived from this hypothesis of stability, just as the characteristics of other systems were derived, in Part I, from the hypothesis of maximization. The hypotheses of *maximization* and *stability* thus constitute the twin pillars upon which Samuelson's edifice is erected.

Although the second part of the book (*i.e.,* the part dealing with the stability of a dynamic system) is its most novel feature and is perhaps Samuelson's greatest contribution to economics, I shall postpone a discussion of this part until a few remarks have been made about Part I. The first part of the book deals with subjects usually regarded as a part of price theory, and although it follows reasonably closely along the traditional lines developed by Slutsky, W. E. Johnson, Hicks, and Allen, it nevertheless represents a substantial contribution to the traditional theory in several respects. After an introductory discussion of the principles of maximizing behavior, the author applies these principles to the theory of cost and production. In this chapter the relation between a firm's production function and its cost curves is used as a point of departure, and this aspect of the theory of production is developed much more thoroughly than in most other treatments of the problem. As in other parts of the book, the author is more interested in presenting general principles or a method of analysis than in probing deeply into special economic problems. For this reason his treatment of production contains less discussion of such things as complementarity among factors of production than will be found in, for example, *Value and Capital*. In the chapter on production and costs, as in most of Part I, Samuelson shows that the theorems which can be demonstrated by means of the differential calculus can also be treated in terms of finite differences.

From his discussion of the individual firm and the decisions of a producer, Samuelson proceeds in Chapter V to a discussion of the behavior of a consumer or group of consumers. The theory of consumer's choice is developed, as in other works on this same subject, by means of indifference directions, and involves a separation of income effects from substitution effects. With respect to the pure theory of consumer's choice, Samuelson is somewhat cynical. He apparently feels that, stripped of its superfluous ethical and psychological connotations, the theory of utility finally yields only a small number of theorems regarding the behavior of rational individuals, and that none of these theorems is of great importance for economics as a whole. Thus, on page 117, after discussing the conditions of consumer's behavior which are implied by the theory of consumer's choice, he says: "Many writers have held the utility analysis to be an integral and important part of economic theory. . . . Nevertheless, I wonder how much economic theory would be changed if either of the two conditions above were found to be empirically untrue. I suspect, very little." Again, at an earlier point (p. 90), he says:

"The concept of utility may be said to have been undergoing throughout its entire history a purging out of objectionable, and sometimes unnecessary, connotations. The result has been a much less objectionable doctrine, but also a less interesting one."

I do not propose to discuss the validity of these views, although I must say, in passing, that I have a considerable sympathy toward them. Whatever their validity, they will have served a useful purpose, in the present review, if I may use them as an excuse for passing lightly over two further chapters in Samuelson's book which deal with certain elaborations of the theory of consumer's choice. These two chapters, entitled "Transformations, Composite Commodities, Rationing," and "Special Aspects of Consumer Theory," deal with such subjects as the use of elasticities of demand, the behavior of the demand for a group of commodities on the assumptions that all of their prices change in the same proportion, the economic meaning of index numbers, and the notion of consumers' surplus. Although Samuelson's contributions to each of these subjects are considerable, when measured in absolute terms, they are, I believe, small in comparison with his contributions to dynamic economics in Part II of the book.

Before proceeding to Part II, however, something should be said about the concluding chapter of Part I, which is a chapter dealing with welfare economics. After a preliminary historical discussion in which the contributions of Marshall, Pigou, Pareto, Barone, Wicksell, and Lerner are described in an illuminating manner, Samuelson presents a systematic treatment of what he calls the "new welfare economics." The latter is defined as the set of welfare propositions which can be derived without making utility comparisons between individuals. Although Samuelson regards his substantive work in the "new" economics primarily as a restatement and refinement of the work of Bergson, his emphasis is somewhat different, and two points, in particular, receive a considerable amount of attention.

The first is the argument that an equal distribution of money income, accepted on ethical grounds as a condition of optimum welfare, provides no basis for a definite welfare function for the community as a whole unless the tastes of all individuals are exactly alike. In other words, there exists no welfare function consistent with this ethical judgment. Samuelson illustrates his argument by comparing vegetarians with meat-eaters. Suppose that in some initial situation all individuals receive the same money income, and that with the given price system, this initial position is regarded as an optimum. If a technological charge now reduces the price of meat to half its former level, relative to the prices of vegetables, it can hardly be said that equal money incomes will again be a condition of optimum, for this implies, an extremely unequal distribution of the gain in real income among vegetarians and meat-eaters.

Although this argument destroys, in part, the logical foundations of *laissez faire* and equalitarianism, it should not, as Samuelson recognizes, prevent an economist from recommending both more competition and greater equality of income as goals of practical policy. The inadequacy of the new welfare economics does not mean that such goals are incorrect but simply that they

are based upon personal judgments and ethical considerations to a greater extent than was formerly realized.

The second point which stands out in Samuelson's discussion of welfare economics is his assertion that meaningful statements regarding welfare are impossible, even for the new welfare economics, without making comparisons between individuals. In other words, the gains of one individual must somehow be compared with the losses of others, a type of comparison which involves much more than the old fashioned measurability of utility. The authors of the new welfare economics have sought, in the past, to avoid such inter-personal utility comparisons by confining themselves to measures involving an actual or potential increase in welfare for all individuals. Thus, if a given measure enables all individuals to obtain more of a given commodity, or if, while some obtain more and others obtain less, the individuals who gain can indemnify the losers and still be better off than before, the new welfare economics asserts that a definite improvement in welfare has occurred. Since everyone gains and no one loses, there is no necessity, according to the "new" view, to compare the losses of some individuals with the gains of others.

This argument, according to Samuelson, is fallacious. The fallacy lies in attributing undue importance to the *status quo* or to the situation prevailing before the change occurred. It is true, of course, that the new situation is an improvement, compared with the old, but what right, asks Samuelson, have we to set up the old situation as a basis for comparison? In deciding whether a given measure improves welfare we should compare the new position not with the old, which in any event may be quite accidental, but with some ideal position of maximum welfare. And in setting up such an ideal standard of comparison it is impossible to avoid inter-personal comparisons. The importance of the ideal position arises from the fact that a change which is an improvement from the point of view of the old position may not be an improvement from the point of view of the ideal.

This argument was foreshadowed to some extent by Scitovszky, who proposed a dual comparison using both the old position and the new as a base. Samuelson's suggestion, however, is much more sweeping than Scitovszky's. And as a practical suggestion it seems to me that it is perhaps too fastidious; for while we might like to know how a given situation compares with the ideal, it is frequently a big help simply to know that a particular change is better than the previous position.

But enough about welfare economics. I must turn now to Part II of Samuelson's book. As I have indicated earlier, I regard this part, which is an exhaustive treatment of the relations between statics and dynamics, as the most important part of the book. In it, Samuelson brings to fruition a method of analysis which was slowly evolving in the years before the war. The central argument of Part II is that static analysis, which involves a comparison of one position of equilibrium with another, has no meaning unless the corresponding dynamic system is stable. In other words, there is no point in discussing a position of equilibrium unless it is a position which tends to be approached when the economic variables are displaced.

Samuelson therefore works with two sets of equations: (1) a dynamic system, which describes the time-movements of the economic variables (differential equations, difference equations, etc.); (2) a static system, which is the special case of the dynamic system arising when all rates of change or time-differences of the dynamic equations are zero. It is his great achievement to have shown that a knowledge of the conditions which are required for the stability of equations (1) frequently enables an investigator to give a rather complete description of the static system (2).

Like other significant developments in economics, this idea, which Samuelson calls the *correspondence principle,* has important antecedents. Germs of the idea can be found as far back as Marshall's famous pamphlet on the theory of international trade, or more recently in Yntema's book on the same subject. And still more recently the relations between statics and dynamics have been discussed to some extent in Hicks' *Value and Capital* as well as in Pigou's *Equilibrium and Employment.* Nevertheless, it remained for Samuelson to present a comprehensive and systematic discussion of statics and dynamics. Most of the earlier discussions were either incomplete or actually erroneous. Hicks, for example, derived his conditions of "imperfect" and "perfect" stability without employing any explicit dynamic system at all. He was able to accomplish this seemingly impossible feat by extending to the case of n commodities a condition of stability which is frequently the correct one for a single commodity, namely, the condition that supply shall exceed demand whenever the price is above its equilibrium level. Although the Hicks stability conditions are valid for a number of economic problems, they are not, as Samuelson shows, universally valid. A complete understanding of the relations between statics and dynamics therefore requires an explicit statement of a dynamic system. Supplying this explicit statement, and developing rigorously the relation of the dynamic system to the static, are Samuelson's main contributions to the subject.

In the first chapter of Part II (Chapter IX of the book), the relations between statics and dynamics are developed for linear systems, or for systems which may be regarded as linear to a first approximation. The general principles developed in this manner are applied to a number of special problems, including the pure theory of foreign trade, a multiple price market, and the theory of employment. In the chapter which follows, non-linear as well as linear systems are taken into account, and conditions of stability are developed for non-linear systems whose linear approximation indicates neutral stability. Finally, in Chapter XI the distinctions between historical and causal systems are examined, and the meaning of a moving economic equilibrium is discussed in some detail.

Chapters IX and X, which form the heart of Part II, were published earlier, in large part, in *Econometrica* (1941 and 1942), and when they first appeared it was my own opinion that the method which Samuelson presented would revolutionize the study of economic theory. Subsequently, I have had several occasions to employ the new method, and while I still regard it as a major achievement, I am inclined to be somewhat more cautious in forecasting its influence upon the future development of economics. There

is no limit, conceptually, to the number of variables that can be handled simultaneously by Samuelson's method, but in practice the algebra becomes so cumbersome as to be almost unmanageable when the number of variables exceeds three or four.

For this reason, I doubt whether, in the study of complicated and unsymmetrical systems such as one encounters in business cycle theory, it will be possible to push the analysis very far without introducing empirical evidence. In other words, I suspect that, in any event, statistical studies will have to be introduced at an early stage of the investigation, and that these will largely supplant conclusions reached from a study of stability conditions alone. Economic theory alone can progress only a short distance, even with the aid of Samuelson's powerful weapons, and beyond this point the still more powerful weapons of empirical research may well make the study of stability conditions a matter of secondary interest. But this is perhaps more a criticism of economic theory as a whole than of Samuelson's contribution to the subject. Within the limitations of theory, it remains true that Samuelson's work is an important advance.

Two appendices, dealing with purely mathematical subjects, conclude Samuelson's book. The first considers the secondary conditions for a maximum or a minimum position of a function of several variables. This should prove highly useful to economists, for the secondary maximum conditions are widely used in economics and it is exceedingly difficult to find a clear and simple statement of them in any of the more popular mathematical texts. The second appendix deals with the subject of difference equations. This also is a subject of increasing importance to economists and one for which adequate treatments in mathematics books are difficult to find. Unfortunately, Samuelson's treatment of difference equations does not possess the simplicity and clarity which characterize his book as a whole. In this particular section of his book, he has striven for a high degree of generality, and in doing so, he has inevitably increased the complexity of the subject. The entire theory is worked out in terms of generalized linear operators, and both difference equations and differential equations emerge as special cases of this general system. From a purely mathematical point of view this may be an interesting procedure, but there is no doubt that it makes the subject more difficult for the economist who wants an introduction to difference equations.

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Economics, An Introductory Analysis. By Paul A. Samuelson. (New York: McGraw-Hill. 1948. Pp. xx, 622. $4.50.)

This is an introductory textbook, designed for a two-semester course, but adaptable also for a one-semester course (which in fact is what its author uses it for). It is addressed primarily to the non-economist who wants to do what he can with the subject in a single course, rather than to the apprentice economist who needs an "introduction" to open the door to more advanced courses. Consequently, it should also be serviceable to the lay reader who wants to know what economists have to offer. But the level of workmanship

is such that the minority of "principles" students who are already committed to go further with economics will not feel they are being trifled with.

The book has three parts. The first consists of eleven rather disconnected chapters dealing with topics where the economist has a clearcut comparative advantage, but where no sustained theoretical reasoning is called for; the nearest thing to a unifying principle is a concern with national income, its composition and distribution. The second part is devoted to "Determination of National Income and its Fluctuations." It opens with a presentation of the central Keynesian doctrine; then come three chapters which give an abridged version of a standard "money and banking" course; then chapters on international finance, the business cycle, and fiscal policy. The third part (which begins only at page 447) has four chapters on "value and distribution," one on international trade and one on tariffs, one on speculation, and one on "social movements and economic welfare."

In presentation, the author has done wonders in steering clear of all avoidable pitfalls. The use of mathematics is held to an irreducible minimum: algebraic formulas are eliminated, diagrams are few and for the most part very clearly labelled; most of the mathematics is arithmetical illustration, with lavish verbal explanations. In view of the author's background, this may be surprising. I gather that the great problem of the publisher's salesmen is to distinguish the Paul A. Samuelson of this book from the Paul Anthony Samuelson who wrote *Foundations of Economic Analysis* (and said in the introduction that "the laborious literary working over of essentially simple mathematical concepts such as is characteristic of much of modern economic theory is not only unrewarding from the standpoint of advancing the science, but involves as well mental gymnastics of a peculiarly depraved type").

Be that as it may, this introductory book is strictly non-mathematical. The writing on the whole is appetizing, and I am confident a student will find it easy to stay awake while reading it. Once in awhile the student may strike a spot where the effort to be sprightly and entertaining is too forced. But almost all the way through, the author pays his reader the compliment of assuming he is ready to think adult thoughts about serious questions (even if in places in adolescent language); and I should not seriously fear that students would lose patience.

In the first part, the arrangement of the chapters is awkward. After the introductory group of chapters, it would be more natural to come to the chapter on "Business Organization and Income" (now 6), then to the group of chapters on the household (now 4, 5 and 10), then to the chapter on "Labor Organization and Problems" (now 9), then to the chapters on government (now 7 and 8). But the chapters are sufficiently self-contained so that a teacher could shift them around into this or some other pattern without confusing the student. This flexibility is exemplified by the author's own suggestion for a one-semester course, which is to jump from Chapter 6 clear past Part Two to Chapter 19 on "Determination of Price by Supply and Demand," go on to 21 on "Cost and Equilibrium of the Firm," then back to Chapters 7-11 from Part One, and then take Part Two as a concluding section. Cross references between chapters are rather scant, but can

readily be supplied by the teacher. Besides, the index is well designed to help the student in searching for cross references or in review.

The supreme merit of the book, to my taste, is a systematic effort to find points of contact between different points of view which students and their neighbors in society may hold. Samuelson's own policy position is middle-of-the-road, favoring private employment for the great bulk of the labor force, and allocation of inputs and outputs primarily through private decisions of households and firms. (At the opening of Chapter 26, he even uses language which might imply that "capitalism" was the only form of economic organization compatible with democratic government; but this seems to be merely bad semantics.) On the other hand, Samuelson stresses the responsibilities for economic stabilization which fall upon government because of the inherent instability of the private economy, and the fact that government cannot evade responsibility for the distribution of income and wealth. The real merits of the socialist case, and the concern of true socialists with democratic freedoms, are brought out—largely with a view to sympathetic understanding of western Europe. Broadly speaking, Samuelson is not out to discredit anybody; but he does not mince words about the evils of fascism and communism.

Throughout the book, Samuelson strives to convey both that some of the student's own "intuitions" (that is, views carried forward from a pre-rational stage of intellectual development) may be in error, and that the uncongenial views the student may find held by other social groups contain some glimmerings of truth. At several stages, Samuelson goes out of his way to point out grounds on which his own findings might be rejected. In consequence of this tone of reasonableness and tolerance, his book should prove congenial to teachers and students over a wide range to right and left of Samuelson's own political position.

Despite its manifold excellences, the book has, of course, a number of weaknesses which the teacher will have to make good. On the whole, this list of weaknesses is probably less serious than for most alternative books. But its character will affect the ways in which the book can be used; and in view of Samuelson's professional attainments, they cast interesting side-lights on the present state of economics.

1. The international relations chapters (16 and 23-24) do not pay adequate attention to interwar and postwar practices. Exchange control and rationing, bilateral "clearing agreements," quotas, and "administrative protection" are barely hinted at; tariffs are treated as the only major type of trade barrier. The problems of keying in privately conducted American dealings with state-trading setups abroad are not treated. "Dollar shortage" abroad (which may well be a chronic problem) is not discussed.

2. In discussing the corporation, Samuelson soft-pedals the influence of debt (especially of the prospect of a refinancing crisis at maturity) and of liquidity; this handicaps the monetary discussions of Part II.

3. In the chapter on "Saving and Investment" (12), the Keynesian "marginal efficiency of capital" is inexplicably left entirely out of the picture; this leaves the rate of interest without any channel to influence investment.

It is not shown that liquidity can influence investment otherwise than via interest (though its effects on consumption and saving are allowed for). The result is a large gap in the theory of interest and in the theory of investment, and an under-valuation of the influence of money. It is interesting that the monetary deflation of 1929-1933 is assigned little weight in Samuelson's interpretation of the Great Depression, and that the part of policy in bringing about that deflation is grossly understated (pp. 346-47).

4. Although Samuelson takes a cash-balance rather than a cash-transactions point of view toward money, he barely mentions time deposits at banks and the monetary significance of government securities as liquid assets, and has almost nothing to say about other aspects of the debt structure.

5. In the "value theory" section, the important distinction between short and long run almost fades out.

6. There is no systematic use and generalization of "opportunity cost" concepts. For example, in Chapter 21, "average cost" is described as governing the entry or departure of firms in an "industry," without any discussion of the degree to which the "cost" includes profits, or the basis for inclusion of some profits. Another opportunity is missed in the marginal-productivity discussion of Chapter 22. Since the whole logic of the book is opportunity-cost logic, this lack of explicitness is a pity. It wastes part of the natural carry-forward of the student's learning process. In particular, it leaves welfare economics needlessly isolated from the rest of the structure; and it throws away a straightforward explanatory principle for the suspension of some economic maxims where there is unemployment.

7. The whole problem of "external economies and diseconomies"—effects of actions by one economic unit on conditions within another unit—seems to be confined within a single footnote on page 603, illustrated by the wastes of over-drilling in an oil field. This leaves the teacher without an anchorage for discussion of such problems as urban land use (though there is a passing reference to the deterioration of neighborhoods). More broadly, it leaves one of the main bases of economic regulation unstated—namely, the suppression of ways of operating which impose major nuisances on the neighbors for minor private savings to the operator. Furthermore, it leaves a gap in the otherwise excellent Chapter 7 on public expenditure: one of the main tests as to whether expenditure should be private or socialized is whether the private spender can capture the lion's share of the resulting benefits, or whether (as with education, health precautions, provision of outdoor recreation areas) the benefits are so diffused that private incentives will leave expenditure far below the social optimum.

8. Samuelson tries to integrate the Keynesian economics with traditional economics on the "T-joint principle." That is, if we are dealing with a world in which unemployment exists, we are operating in an analytical dimension where the Keynesian analysis is relevant but the traditional allocation-theory is not; whereas if we are dealing with a world of full employment, the "classical" analysis comes into its own, and we are operating in an analytical dimension where we can assume away the Keynesian problems. Only if we are at the joint of these two sets of problems (*i.e.,* if we are looking at a

full-employment economy which threatens to sag off into unemployment or boil over into inflation) does Samuelson see both sets of considerations applying at once.

One consequence is a pedagogical handicap. The student is told that if and when the nation has solved the problem of full employment without inflation "there will rise to the top of our national policy agenda—and properly so—the true and abiding universal economic problems which every economic society has had to face since the garden of Eden" (p. 436). But he is also told, most persuasively, that we are a long way from the attainment of stability. Will the student not shrewdly suspect that we economists are teaching the material of Part III because we have an intellectual vested interest in it, rather than because we really believe in it? And if so, can we expect him to take it seriously? A further consequence is that even if the student decides to accept our judgment that the stuff matters, the whole argument is out of perspective, and many of the appropriate applications are not drawn.

This "T-joint integration," of course, was not invented by Samuelson and is not his monopoly. On the contrary, it is probably the most common pattern of integration in present-day theoretical thinking. But we should be able to better it. Logic allows us to cross the T at any other point on the unemployment-inflation dimension as well as at full-employment equilibrium. That is, any event which does not promise to make unemployment or inflation worse can be judged on its allocation-merits just as well when 10 million are unemployed, or when 1½ million are unemployed and prices rising at 15 per cent per annum, as when unemployment is 2 million and prices stable. This view of things corresponds to Samuelson's practice if not to his methodological prospectus. For example, he refuses to fall into the trap of judging government expenditures to avert unemployment solely by the amount of unemployment averted, but properly insists that if these expenditures use up productive services, their fruits must be as rich as those of similar services in private use.

9. Samuelson is unduly preoccupied with static equilibrium. On page 37, for example, he declares that when supply everywhere matches demand and prices match cost, our three economic problems ["for whom, how, and what" production is carried on] "have been simultaneously solved." Surely, they are "solved" by whatever happens, whether or not the outcome is properly an equilibrium. The likelihood that processes adjusting saving and investment will lead to oscillations rather than to balance (*cf.* A. F. Burns) is not visible in Chapter 12. On the other hand, in Chapter 17 where the business cycle is in the focus of attention, there is no explanation how monetary equilibrium works in. Chapter 18 on fiscal policy hinges on a distinction between "anti-cyclical" and "long-range" fiscal policy which again implies an analytical gap between the thinking focussed on equilibrium and that framed in terms of cycles.

Admitting that we lack a fully matured theory of economic dynamics, surely the dynamic side need not be left so completely blank. Samuelson has no discussion of the planning of future operations within business units. He

barely hints at the crucial distinction between *ex ante* and *ex post* views of economic events. Uncertainty does put in a brief appearance as an influence on the demand for cash; but the importance of deferring decisions pending fuller information is slurred over. Such topics as these could not be brought in without some complication of the logical structure. But it is far from clear that they would make the study of economics harder for the student. They would help him to see that economics is about the kind of world we live in, and thus help overcome one of the main factors which inhibit the student's learning process—the suspicion that economics is a parlor game rather than a way to understand reality.

As I indicated above, this listing of weaknesses should not obscure the virtues of the book. Almost all my criticisms relate to omissions. But any reasonably compact introduction to economics, if it is not to skimp the subjects it does deal with, must make serious omissions. If we can come to expect most students who take elementary economics to come out with a reasonable grasp of what can be learned from this book, we can have a good conscience about this most important of the profession's teaching responsibilities.

Albert Gailord Hart

Columbia University

Pricing, Distribution, and Employment—Economics of an Enterprise System. By Joe S. Bain. (New York: Henry Holt. 1948. Pp. xiv, 496. $3.75.)

Professor Bain has written a good textbook on economic theory at the intermediate level. It deals simply and correctly with the customary topics of price theory and also, at unusual length, with investment and aggregate output. It is motivated by a search for realistic, not merely elegant, theorems. These praises should be set forth clearly, lest the general quality of the performance be forgotten in the discussion of details.

Bain has sought to present economics as a body of substantive knowledge rather than as a set of techniques of analysis. This shift in emphasis is desirable in economics generally, and it is especially desirable in a textbook for students who usually will not take additional work. Accordingly, Bain omits certain topics (utility theory, much of the laws of return) commonly found in textbooks, and has unusually detailed chapters on monopoly and oligopoly. He has achieved considerable success in making this shift in the treatment of price theory (Chaps. 2-9), except for the presence of a chapter on monopolistic competition, which he properly concludes is a minor variant from competition.

When an economist focusses attention on matters of substance, however, he is under strong temptation to employ casual (and popular and often wishful) empiricism in the many areas of economic life that have not been carefully explored. Bain believes that the economy is overwhelmingly oligopolistic, and writes to fit the belief. My own tentative estimates, soon to be published, suggest that in the allocable sections of the economy, competition is three or four times as important as all other forms of market organization combined. Bain may disagree with some of my detailed classifications, although his

illustrative lists (*e.g.*, p. 180) do not suggest that this is an important difference between us. The real source of the difference, rather, is that Bain has not attempted to reconcile his impression of the entire economy with his knowledge of specific industries.

Aside from this matter of realistic wisdom, the only questionable general point is the organization of the discussion of distribution. Competition is discussed in Chapter 10, monopoly in Chapters 7, 12, 13, and 14, and the law of variable proportions is introduced in Chapter 10, rather than in the more appropriate earlier chapter on production costs. This arrangement makes for duplication and temporary frustration.

There remain the long chapters on capital and aggregate output. The former is the least satisfactory in the book. It is early Austrian in conception: the "original factors" assumption (fallacy) permeates the discussion, although as usual no real use is made of it. Bain's apparatus runs in terms of long-run stationary states with different amounts of capital, an approach calculated to convey the minimum possible information on the role of capital in economic growth. The relationship of total investment to investment per time period is left unexplained. Only unexciting technique is discussed; the chapter applies as well to the age of Pericles as to that of Roosevelt.

The succeeding chapter on aggregate output and employment, viewed as technical analysis, is very good. Keynesian theory is presented carefully in terms of Robertsonian definitions and periods. Some steps in the analysis usually skipped over are here carefully developed, and numerous popular errors (such as reproducing a table from the Consumer Purchases Study to illustrate the consumption function) are conspicuously absent. Bain's is the best textbook treatment I have yet seen of the mechanics of this energetic doctrine.

There is one respect in which the entire book is seriously deficient—in the writing. The style itself is placidly dull. The formulations are frequently imprecise, and there are quite a few slips in reasoning. The following are examples. The firm attempts "more exactly, to maximize the difference between money income and money outgo. . ." (p. 10)—*i.e.*, it maximizes or minimizes cash balances? The obsolete Marshallian definition of elasticity of demand, with a negative sign prefixed, is revived (p. 33), and then consistently misapplied to obtain negative elasticities. The discussion of diminishing returns is tautological (pp. 67-68). The cost curve in Figure 12 is impossible. Five conditions are given for free entry (p. 99 n.); none is strictly necessary. On page 117 the equality of long-run average costs of competitive firms is a tautology, by page 120 it becomes an optimum property. In the chapter (6) on oligopoly, unnecessary difficulty is created by the practice of discussing long-run problems in terms of short-run curves. Prices of capital goods are treated as independent of the interest rate (p. 329). Borrowing does not decrease the present value of future spending (p. 361). The effects of alternative assumptions on the conclusions drawn from the Keynesian theory are grossly understated (p. 416). It is to be hoped that Bain will soon remove such blemishes from his useful work.

George J. Stigler

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Fundamentals of Economics. By MYRON H. UMBREIT, ELGIN F. HUNT and CHARLES V. KINTER. (New York: McGraw Hill. 1948. Pp. xi, 461. $3.75.)

Professors Umbreit, Hunter and Kinter have contributed another text for a one-semester introductory course in economics. It is based on the tried and true foundations laid down more than a generation ago and is little encumbered by the developments in economics during the last score of years. The book does contain chapters on the income-expenditure approach and imperfect competition, but these are in the nature of digressions and could be easily skipped without interfering with the continuity of the volume.

The text starts with the usual chapters on fundamental concepts and the inevitable accompanying definitional aridities. The forces of monopoly and competition are analyzed and the several structural forms of the firm are described. The existence of imperfect competition is not disclosed until several hundred pages later.

A discussion of money, banking and the price level follow, including an isolated chapter on the aggregate income approach. With this background, the authors plunge into a detailed discussion of price determination by the firm operating under conditions of perfect competition and monopoly. Well over half the book is devoted to this topic.

An interlude on perfect competition and international trade separates price determination and distribution. While geometric charts are widely utilized in demonstrating price determination in the competitive and monopolistic markets, the treatment of imperfect competition is entirely institutional and based almost completely on the TNEC monograph, *Competition and Monopoly in American Industry*. The chapter is limited to definitions of the various types of imperfect competition and some brief case studies.

The marginal analysis is rigidly applied to the five chapters on distribution. The chapter on wages, however, offers an exception and apparently a great deal of confusion. We read that "the equilibrium wage rate tends to be established at the rate that equalizes the number of workers seeking employment and the number of workers that employers desire to hire. At such a point, the wages of labor equal its marginal productivity" (p. 360). Nevertheless, in the next paragraph, summarizing wage theory, the authors state "no theory offers a complete explanation of the wage problem." Or compare these two almost adjoining sentences: "Wage rates set at any other level (than marginal productivity) will not remain stable for long." And a little further: "Wage rates tend to be rather rigid, and the pressure of the unemployed may bring them down slowly."

The confusion is compounded a few chapters later, when the authors apparently endorse the wages-fund theory. "To the business firm, rent and interest are costs which in the long run must be covered if production is to continue. If unions could succeed in pushing wages high enough to encroach on normal payments of rent and interest, the effect would be to discourage production and decrease employment" (p. 428). But elsewhere the authors state: "The truth is that wage rates are established in the market. With this rate in mind, the employer sets his production schedule and prepares his

budget in which expenditures for labor are enumerated" (p. 355).

The authors also seem to accept the existence of a dichotomy between theory and practice. The marginal productivity analysis is offered as a theoretical explanation of wage determination, while the bargaining theory "offers an attempt to give a practical explanation of what takes place in the market" (p. 355). The volume closes with a discussion of taxation, labor organization and the role of the consumer in our economy.

The announced purpose of the volume is "to introduce college students to the study of economic principles." The authors also assure the reader that "the book is modern in its viewpoints and its theories" and the discussion has been limited to basic data and ideas "essential to an understanding of our economy."

This raises a number of basic questions as to the wisdom of the selection of the topics discussed in the text. Considering the present state of development of economic theory, is it "modern" to devote ten chapters to the economics of the firm and only a single chapter to the aggregate analysis? Ninety-two pages to price determination under competitive conditions and sixteen pages to imperfect competition? Or to turn to greater detail, on the basis of the space allocated in this text, the student would gather that the operation of gold points is at least just as important in our society as the economic effects of unions or monopolistic competition and twice as important as the national debt. Many similar examples could be cited.

The ommission of some topics which are now commonly considered within the scope of elementary economics texts is no less baffling. For example, the reader would look in vain for such subjects as separation of ownership from control, social security, government control of business, the "mixed" capitalistic nature of our economic system.

Questions of public economic policy are conspicuous by their absence. Adam Smith's canons of taxation are the only criteria mentioned for a well-designed tax system. The use of public finance for countercyclical fiscal policies is not discussed. The pervading problem of economic instability is only alluded to in passing. It receives less attention than bimetallism or price determination in a competitive market in the intermediate period.

The pedagogic soundness of the book is questionable on other scores. Terms and concepts are occasionally used loosely, inaccurately, or without prior explanation of their meaning. The authors assert that expenditures will increase as a result of increase in M due to "human nature being what it is" (p. 86). "Real wages consist of goods and services rather than money" (p. 427). Full employment, base year, bank acceptances, "country" banks are some of the terms used without previous explanation of their meaning. The Gold Reserve Act of 1934 did not reduce the gold content of the dollar as stated (p. 51), nor is membership of international unions limited to the United States and Canada (p. 419).

The volume is orthodox and unimaginative. Statistical material and empirical illustrations are scanty. Little use is made of the wealth of material made available by government publications and private research organiza-

tions. The references listed at the end of each chapter supposedly designed at broadening the horizons of the students are along conventional lines and limited almost wholly to other textbooks—sometimes dated editions are cited where later ones are available.

SAR A. LEVITAN

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The Economic Doctrines of John Gray—1799-1883. By JANET KIMBALL. The Catholic University of America Studies in Economics, Vol. 21. (Washington: Catholic Univ. of America Press. 1948. Pp. 162.)

Miss Kimball surveys the critical and constructive ideas of John Gray, the ninteenth-century British socialist and businessman, and concludes that Gray's chief contribution to economic thought was his development of the law of markets (p. 150). She clarifies some of the apparently contradictory aspects of Gray's position by tracing the changes that occurred in his thinking, beginning with the vigorous, socialistic *Lecture on Human Happiness* of 1825, through his later, purely monetary-reform period in which he denied any taint of socialism, to the complete intellectual quiescence of the last thirty-five years of his life. Miss Kimball suggests that Gray's early socialist ardor was extinguished by his growing success as a businessman (p. 9).

Like the other so-called "Ricardian socialists," Gray drew radical conclusions from the labor theory of value and proposed the establishment of a social order in which those who work should receive the "whole produce of their labor." He rejected *laissez faire* not only because of its inequity to labor, but also because he believed it was unworkable and must lead inevitably to general overproduction and periodic collapse. Gray attributed the overproduction of goods to the underproduction of money. Although his specific proposals changed over the years, they all had as their common objectives the elimination of the deficiency of effective demand. As Gray expressed it, "Production, naturally the cause of demand, shall be so practically." He insisted that money should occupy an integral position in the general analysis of production and distribution. He rejected the barter analogy which characterized the main tradition of economic theory after Ricardo incorporated Say's law of markets into the principles of political economy.

Having thus analyzed Gray's contribution, Miss Kimball might have added greatly to the significance of her work if she had indicated its relation to the present-day "revolution" in economic theory in which the work of J. M. Keynes occupies a central position. Keynes' work, like that of Gray, rests upon a criticism of Say's law of markets and upon an insistence that money must be integrated into the main body of economic principles. On the policy side, it is associated, as was Gray's work, with a repudiation of *laissez faire*. In that aspect of Keynes' thought which leads him to praise Silvio Gesell, the similarities between Gray and Keynes are so striking that one wonders how they could have been ignored completely. There is, for example, probably a much closer intellectual and social affinity between

Keynes and Gray than between Keynes and Malthus, who is usually singled out as the most important early precursor of Keynes. Miss Kimball has thus failed in one important respect to fullfill her self-assigned task of "placing" Gray in the history of economic thought. However, one can hardly quarrel with her main conclusion that Gray's chief contribution was to the law of markets.

DUDLEY DILLARD

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Economic History

Economic Policy and Democratic Thought: Pennsylvania 1776-1860. By LOUIS HARTZ. (Cambridge: Harvard Univ. Press, 1948. Pp. xviii, 366. $4.00.)

The myth of *laissez faire* has, during the past century, played an important part in obscuring the structure of the capitalistic economic system and in confusing the minds not only of policy makers but of economic theorists as well. Indeed, it may not be too wide of the mark to venture (1) that the myopia induced by *laissez-faire* hallucinations accounts in large part for the unbridged gap that separates economic orthodoxy from socialist dogma and (2) that the highly emotional conflict generated by this dichotomy has seriously retarded the development of a realistic understanding of the economic system and consequently has delayed the development of theories and policies adequate to the solution of economic problems.

If these remarks have a reasonable degree of validity, it follows that Professor Hartz's *Economic Policy and Democratic Thought: Pennsylvania 1776-1860* is an important contribution not only to economic history but to economic theory as well. For in this work he provides a carefully documented demonstration that, at least in Pennsylvania, *laissez faire* was not an aspect of American social thought or practice during the period between the Revolution and the Civil War. There is no reason to suppose that Pennsylvania's experience was atypical, and therefore no reason not to conclude that the often-appealed-to golden age of *laissez faire* is but a figment of imagination. However, the Committee on Research in Economic History of the Social Science Research Council, which promoted Professor Hartz's study, is sponsoring three similar studies covering the experiences of Massachusetts, Georgia, and Illinois. Those who prefer not to accept Pennsylvania's experiences as definitive must await the appearance of these other works.

Professor Hartz recognizes that most of his readers assume that the period 1776-1860 saw the flowering of *laissez faire* in the United States. He therefore explains at the outset the causes of this misapprehension. These causes are not far to seek. They stem mainly from two all too obvious facts, first that there was a sharp reaction in the colonies against British mercantilist restrictions and second, that after the Revolution there was widespread opposition to positive economic action on the part of the federal government.

The historical analysis that leads to the false conclusion that *laissez faire*

was the dominant theory and policy in ante-bellum America contains several flaws. First, there was failure to stress that opposition to positive federal economic policy grew largely out of regional self-interest. This opposition found strong support in the constitutional limits on federal power, limits that were obviously effective during a period when economic activities were so largely local in nature. Prerogatives of the individual states, not a dominant *laissez-faire* philosophy, were the important matter in the opposition to federal economic action. Second, there was a notorious failure to analyze adequately the manifold interventionist steps taken by the individual states themselves. Overwhelming emphasis on the role of the federal government has concealed the multitudinous measures taken by state and local governments to promote, regulate, and control a wide variety of social activities.

In carrying on his analysis, Professor Hartz ranges over a number of social developments. In all of them he finds that government consistently played a positive and important role. He traces in detail the development of corporate charter policy, the mixed corporation, public works, and regulatory functions in the realm of labor legislation, licensing, sumptuary legislation, and debtor-creditor legislation. He is meticulous in searching out and identifying the motives, attitudes, and theories underlying each case he discusses. Everywhere the evidence shows an interrelationship between interventionist philosophy and democratic thought. He finds no important signs of a *laissez-faire* philosophy until toward the end of the period. Indeed, his study shows that Chief Justice Black of the Pennsylvania Supreme Court voiced the general attitude when he said in the Sharpless case (1853): "It is a grave error to suppose that the duty of a state stops with the establishment of those institutions which are necessary to the existence of government. . . . To aid, encourage, stimulate commerce, domestic and foreign, is a duty of the sovereign, as plain and as universally recognized as any other."

It is clear from Professor Hartz's analysis that *laissez-faire* theory in the United States did not develop fully until after the end of the period to which he confined himself. He therefore does not trace it through to full bloom. He does, however, detect its beginnings around 1850 and strongly implies that it was fostered by corporate interests anxious to minimize government control over their expanding activities. Falling back on classical theory, these corporate interests could easily portray government controls of any sort as a wasteful contravention of the natural order, and to double-lock the door any step toward government intervention was tagged with the socialist label. In this carefully cultivated atmosphere the reputable economist could not point to the obvious fact that government is an integral part of any economic system, including private capitalism. Government as a positive force was excluded from orthodox theory. Thus we have come down to the present with a truncated orthodoxy. The myth of *laissez faire* is at least one of the villains of the piece—a villain whom Professor Hartz is helping to banish.

William C. Bagley

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National Economies

German Realities—A Guide to the Future Peace of Europe. By Gustav Stolper. (New York: Reynal and Hitchcock. 1948. Pp. x, 341. $3.75.)

Despite a number of errors of fact which the author would certainly have corrected had he lived to read the proof sheets of this book and despite what seems to the reviewer a faulty appreciation of the limits within which American policy could have influenced the course of events, this is perhaps, the best study that has appeared on the problem of Germany.

Stolper is at his best in describing the existing situation in Germany, in discussing the probable economic and political development in Germany and in assessing the consequences of the German debacle for the future of international relations. He is at his weakest in evaluating the results in Germany, and in Europe, of American policy.

Stolper is severe indeed in his indictment of American political leaders and the international agreements they entered into. "Yalta was the work of amateurs unburdened and unhampered by knowledge of history and real international experience. Potsdam was the artifice of lawyers who believed in solving world problems by a few nice formulas which could be read and interpreted by all parties concerned as they pleased. The Level of Industry Agreement of 1946, finally, was the product of a horde of statisticians, 1500 of them—American, British, French and Russian—going berserk against all warnings of economic reason."

The author contrasts very effectively the vindictive language of J.C.S. 1067, the first fundamental directive of the U.S. Military Governor, with the sweet reasonableness of the Atlantic Charter which pledged the support of the United States to principles to be applied alike to "victor and vanquished."

The reviewer happens to agree with Stolper that the Morgenthau Plan was assininity rampant, that the articles of Potsdam, in so far as they were not ambiguous, were contradictory, that J.C.S. 1067 spoke the language of a Carthaginian peace which was not only unworthy of this country but contrary to its best interest. He would agree, furthermore, that the representatives of this country, in their negotiations with the Soviet Union, held views with respect to the possibility of joint action which have turned out to be mistaken. But he would also hold that, as concerns the main course of events in Germany and Europe, it would have made relatively little difference if U.S. leadership had pursued a radically different policy.

On the assumption that the interests of the Soviet Union and of the United States are fundamentally opposed and that conflicting ideologies make mutually satisfactory agreement impossible—and this, after all, is the assumption on which Dr. Stolper argues—Germany and Europe would have been partitioned along approximately their present lines regardless of American policy. The great strategic consequence of World War II was the emergence of the Soviet Union as the sole great power in Europe. Stolper recognizes that fact and effectively develops the argument that, even under the most favorable of circumstances, it is highly improbable that Germany can ever regain a first-rate military position. But he persistently refuses to recognize

the limitation imposed by the Russian rise to power on American policy in Germany and in Europe.

"The Yalta Conference," the author says, "was the climax of American self-delusion about the nature of both the German and the Russian problem" (p. 17). At the time of the Yalta Conference, he notes, "The German Armies were in full flight and dissolution, the American and British divisions were sweeping over the land and overriding the most important parts of Germany, which are now in the Russian Zone." The implication is that Roosevelt, at Yalta, held all cards and refrained from playing them through sheer stupidity.

In fact, at this date American forces had but recently won the desparate "Battle of the Bulge" and no British or American division was as yet as far forward as the Rhine. But in any case these errors are irrelevant. Even if American eyes had been wide open to Soviet intentions, Russian domination of approximately the area now dominated could not, short of war, have been prevented. We could, assuredly, have taken action that would have avoided the present situation in Berlin; no doubt we could have facilitated the common administration of western Germany though the experience of Anglo-American military government in Italy and the divergence of French views on Germany indicate some of the difficulties involved; certainly we could have oriented our policy sooner toward the economic rehabilitation of western Germany. But, although these and other changes in the American position in Europe, which would have been possible had American political leaders possessed a different view of Russian intentions and had they followed a different course of action, are not insignificant, they fall far short of overcoming the consequences of that split in Germany and in Europe about which Dr. Stolper mainly complains.

One can be critical of American policy toward Germany without falling into the error of concluding that the war was won only to have the peace lost by the stupidity of politicians. Dr. Stolper comes perilously close to this view.

The author's analysis of the current economic situation in Germany and the prospects for recovery is informed and penetrating. Although he overestimates, in the opinion of the reviewer, the extent of material destruction in Germany, he has probably not overestimated the difficulties of rehabilitation. Many economists have argued, on the basis of the German experience in the 1920's, and with regard to the relation in any productive economy between the value of capital plant and of annual output, that the restoration of Germany's production was a relatively short-period affair. But much more has been destroyed than physical plant and equipment. The economic and political organization within which economic life functions has been shattered; trade connections have been lost; a moral degeneration disruptive of ordered economic activity is far developed.

With respect to Germany's long-term prospects, Stolper rightly emphasizes the catastrophic effect of two wars, the great depression, and the dismal aftermath of World War II on the age and sex composition of the population. He thinks it probable that the total population which is now, in the whole of Germany, roughly 68 million, will be reduced in the generation

beginning in 1980 to less than 40 million. Biological destruction and territorial truncation provide effective limitations to German military potential regardless of the extent of German industrial recovery. While Stolper favors continued demilitarization and stringent prohibition of any type of rearmament, he takes the view that measures such as industrial disarmament or internationalization of the Ruhr designed to promote security by limiting Germany's industrial potential are both militarily unnecessary and economically stupid. With this position the reviewer wholly agrees.

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Reparationen, Sozialprodukt, Lebensstandard: Versuch einer Wirtschaftsbilanz. By G. W. HARMSSEN. (Bremen: Friedrich Trüjen Verlag. 1947. Pp. 125, 307.)

For the first time the voice of a prominent German has been heard on the subject of Germany's economic future. Mr. G. W. Harmssen, vice-president of the senate of the city-state of Bremen (U.S. zone of occupation) and a member of the bizonal State Council, was asked by the prime ministers of the German states in the combined U.S.-U.K. zones to prepare a basic statement on the German attitude toward the problem of reparations. In his report he tries to present a balance sheet of the entire German economy. The report includes a main volume and twelve appendices and discusses reparations in international law, reparation problems after the first World War, Allied reparation claims, the German standard of living and national income, Germany's economic and social structure, food and agriculture, industry, transportation, exports and imports, removal of industrial equipment, fiscal policy and capital formation, and the payments already made by Germany to the Allies. The report contains frequent digressions into the fields of philosophy, political science, and law, but only selected statements on economic matters—those which seem most startling—will be discussed at this time.

The basic argument of the report is briefly summarized in the following paragraphs.

The reparation claims of the Allied nations are limited by the so-called Potsdam Agreement, which guarantees the German people a standard of living at least as high as the average standard of the other European nations. Before the war, the German standard, taking into consideration the peculiarities of the structure of the German economy, actually was not higher than the average standard of similar nations of Northwestern Europe, with which alone it should be compared. At most, German *per capita* consumption might be permitted to fall 15 per cent below the 1936 level. This means that even the revised level of industry for the U.S.-U.K. zones, which provides for a *per capita* income about 25 per cent below 1936, is far too low. It also means that the income level on which the European Recovery Program is based is utterly insufficient: Germany must not be compelled to export any coal or steel before 1952, and the prospective production of machinery must be doubled. The German national product must be maintained at a minimum of

63 billion reichsmarks of 1936 purchasing power.[1] Of that amount, about 2 billion reichsmarks is needed for new investment, 4.7 billion for reconstruction investment, 3.3 billion for the satisfaction of pent-up consumers' demand, and 53 billion for the satisfaction of normal consumers' demand. In 1952, output of goods and services could reach a maximum of 60 billion reichsmarks; therefore, at that time foreign assistance still will be needed to the extent of 3 billion reichsmarks annually. The austerity of this program is indicated by the fact that in 1952 *per capita* income in Germany will be lower than before the war, while that in the United States will be higher by one-third (pp. 23-37).

The magnitude of the task of achieving a national product of 60 billion reichsmarks by 1952 is demonstrated by a discussion of the present national income and wealth. In 1946, German national product was only 32 billion reichsmarks, as compared to 66 billion in 1936; because of reparations paid out of current production, only 25-30 billion actually was available to domestic consumers. Considering the value of the lost territories (Eastern Germany and the Saar), the confiscation of the property of German refugees as well as of foreign assets and the merchant marine, looting by members of the occupation forces, and the damage caused by the military action of the Allies during the war, the prewar national wealth of Germany (about 550 billion reichsmarks) has been reduced by 40 per cent; at present, national wealth is as low as it was in 1924, at the end of the German inflation following the first World War (p. 46). German forests are threatened with extinction within twenty years if the present rate of exploitation continues, especially in the British and French zones. Germany is even prevented from sending out whaling fleets in order to avoid the extinction of an animal which is hunted by all seafaring nations (pp. 49-50).

German industrial capacity has decreased by 7.7 per cent because of the losses in the East and the Saar, and by another 20-25 per cent because of war damage. On a 1936 basis, actual production was only 27 per cent in 1946 and 40 per cent in the first half of 1947. Moreover, at least half of the production in the U.S.S.R. zone went to the Soviet Union. The level of production of consumers' goods was even lower than the average. Under these conditions, further removal of industrial equipment would be unjustified, quite apart from the psychological effect of removals upon the industrial workers. Finally, removals would use large quantities of scarce lumber for packing: that lumber would be sufficient to manufacture furniture for one million bedrooms for the German population (pp. 52-57).

German import requirements in 1952 will include 3 billion reichsmarks for foodstuffs and 3 billion reichsmarks for industrial equipment and raw materials. Moreover, Germany will have to provide for one billion as freight payments and 0.75 billion as debt service, based upon prospective reconstruction loans of 15 billion reichsmarks. In order to bring about an equilibrium

[1] The appropriate factor for converting reichsmarks of 1936 purchasing power into dollars of 1948 purchasing power may be roughly estimated at approximately 60 cents per reichsmark. In this review, all reichsmark figures refer to reichsmarks of 1936 purchasing power.

in the German balance of international payments, Germany will have to export annually goods valued at 7.7 billion reichsmarks (p. 63).

Despite its poverty, Germany already has made reparation payments to the Allied nations, which should be valued at 177.75 billion reichsmarks. These payments include the items listed in the following table; they are far larger than the maximum sum of reparations, which was demanded by the Soviet Union and rejected as excessive by the Western powers.

MR. HARMSSEN'S ESTIMATE OF GERMAN REPARATION PAYMENTS
(in billions of reichsmarks at 1936 prices)

Value of Eastern Germany		65.0
Value of the Saar		5.0
Confiscated property of German refugees		40.5
Confiscated foreign assets		9.75
Confiscated German gold		0.75
Confiscated merchant marine		0.5
Publication of German patents		12.5
Labor of prisoners-of-war		5.0
"Manipulations" with Allied military currency		1.75
Removal of rails (mainly U.S.S.R. zone)		1.0
Sovietized corporations (U.S.S.R. zone)		1.6
Removed industrial equipment:		
U.S.S.R. zone	4.8	
French zone	1.2	
U.S.-U.K. zones	3.5	
Berlin	1.5	10.9
Cost of removal of industrial equipment		8.0
Loss through forced export of coal		0.5
Loss through forced export of timber		1.0
Reparations out of current production (French and U.S.S.R. zones)		14.0
Total		177.75

The author's arguments and estimates, as outlined above, are open to serious criticism.

There is nothing in the Potsdam Agreement to suggest that the Allied powers intended to guarantee to Germany a standard of living considerably higher than that of many liberated nations. Even if that were true, however, it would not follow that Germany's *per capita* consumption must not fall by more than 15 per cent below the 1936 level. In fact, a *per capita* income 25 per cent below 1936, corresponding to a national product of about 52 billion reichsmarks, still would leave the Germans with a standard of living higher than that of prewar Czechoslovakia and considerably above the prewar average of continental Europe as a whole. The author admits that such a national product could be reached in 1951 and that its maintenance would not require foreign assistance after that year. Moreover, the German "pent-up" demand for consumers' goods will not be as large as the author assumes: durable consumers' goods, except housing, are far less important in Europe than in the United States, and semi-durable goods will be fully replaced by the satisfaction of "normal" demand within two or three years. It is true that

such a development of the German standard of living would not compare favorably with progress in the United States, but there is little reason why it should.

The author also overestimates the gap between the present level of production and that to be reached in 1951. In the spring of 1948, industrial output was officially estimated at about 50 per cent of 1936; the official figures, however, probably underrated the volume of commodities channeled into black and "gray" markets. If these goods had been taken into consideration, the output would probably have reached 60 per cent of 1936 or about 40 billion reichsmarks. An annual increase of 10 per cent of that level would make it possible to reach the goal of 52 billion in 1951. Aid under the European Recovery Program, plus the assistance given by the U.S.-U.K. occupying forces for the prevention of disease and unrest, should be more than sufficient to make such progress possible, unless political disturbances intervene.[2] Germany's recovery after 1924—when its national wealth, according to the author, was at the same low level as at present—showed the rapidity at which recovery can proceed once political obstacles are removed. Neither the slight overcutting of the German forests, needed to make good at least a small fraction of the damage done by the Germans in Allied countries, nor the exclusion of Germany from whaling will interfere substantially with the reconstruction of German industry. By the way, the opposition to reconstruction of the German whaling fleets is probably not due merely to concern about the fate of the whales: Germany's neighbors have not forgotten the use made by Germany of its merchant marine in the attack upon Norway.

The question of the removal of industrial equipment is more complicated than the author seems to recognize. There is no doubt that even in the U.S.-U.K. zones much of that removal is uneconomical; that in some cases machinery is removed which might be used for the development of Germany's peaceful industries; and that decisions sometimes are based upon ignorance or even upon fear of normal competition. The author, however, does not take into consideration that the bulk of all machinery removed from the U.S.-U.K. zones was part of the German war industry, and that much of the rest owed its existence merely to the German drive for self-sufficiency and for overdevelopment of heavy industries. A considerable part of the equipment therefore must be regarded as real economic surplus: even if the removal of machinery for the production of explosives, poison gas, guns, war planes, and warships does not greatly benefit the economy of the Allied powers, it certainly cannot greatly harm the future economy of a peaceful Germany. The fact that such removals make necessary the use of lumber that otherwise could be made into bedroom furniture for the German population, does not seem to be a sufficient reason for leaving Germany with the greatest concentration of war industries in continental Europe.

The author's forecast of German foreign trade requirements would be more interesting if it were somewhat more detailed. While the calculations made in connection with the European Recovery Program cannot claim a

[2] By August, 1948 industrial output in the U.S.-U.K. zones had already risen to 67 per cent of 1936.

high degree of accuracy, their refutation cannot be undertaken by means of a few global figures. Germany will need somewhat greater food imports than before the war, but the figure quoted by the author not only exaggerates the importance of the relatively small surplus sent before the war from Eastern to Western Germany, but also disregards the savings made possible by lowering the quality of the German diet. Moreover, it appears that freight charges are already included in the import figures quoted by the author. With these corrections, Germany's import needs (including freight) in 1952 probably will be closer to 5.5 billion than to 7.0 billion reichsmarks. Imports plus the net balance on service account (postwar debt service) would require exports of not more than 6.0 billion reichsmarks, a sum actually reached in 1937 and probably not beyond future German capacities.

It is true that Germany's balance-of-payments problem will be aggravated by the disruption of trade with Eastern Europe, which before the war played an important role both as a source of supply of food and some raw materials and as a market for industrial products. Even before the war, however, the great bulk of Germany's foreign trade was with Western Europe and overseas countries. In fact, Germany's reliance on food imports from the East probably was influenced by political rather than economic considerations: in a free world market, the produce of Eastern Europe hardly could compete with that of the United States, Canada, Argentina, and Australia. The shift from Eastern to overseas sources of supply therefore should not increase the cost of most staple food imports. On the other hand, the higher standard of living in some overseas countries that profit from increased demand for their agricultural products should expand the market for German quality consumers' goods, and the plans for industrialization of undeveloped countries in the Middle East and Australasia should create an important market for German heavy industrial goods. As far as Western Germany is concerned, even a permanent rift between the Western and Eastern zones of occupation need not endanger the eventual achievement of equilibrium in the balance of payments: Western Germany probably needs less than 60 per cent of the imports, and produces more than 60 per cent of the exports, of the prewar Reich. Moreover, exports to the West formed a larger part of its foreign trade than was true for the Eastern zone, and therefore will be less affected by the necessary shift from Eastern Europe to other markets.

The strongest criticism, however, must be reserved for the author's computation of Germany's alleged reparation payments. Some very large items listed by the author—value of ceded territories, property of ethnic Germans who were not German citizens—should never have entered the list, and most of the remaining items are vastly overvalued.

The value of confiscated foreign assets is reported to be about 1.5 billion reichsmarks, rather than 9.75 billion as estimated by the author. The "German gold," which the author wants to be credited to Germany on reparation account, actually was less than the equivalent of gold looted by the Germans during the war in Allied countries. The value of the German merchant marine was 0.2 billion, and not 0.5 billion reichsmarks.

The value of the publication of the German patents is greatly exaggerated. The author admits that about 100,000 out of the 115,000 published patents were already in existence in 1931 and therefore would have expired in any case by 1948 at the latest. The author's computation thus attributes a value of almost one million reichsmarks to each of the remaining 15,000 patents. Since the overwhelming majority of all patents is completely worthless and only a few produce revenues of any considerable size, the actual value of these patents probably was less than one per cent of the sum quoted by the author.

The labor of prisoners-of-war could be claimed by the belligerent nations—against proper compensation in reichsmarks—up to the time of a conclusion of a treaty; at least in the West, this compensation has been paid. Moreover, the Allied powers have agreed, upon U.S. initiative, to return all prisoners-of-war before the end of 1948.

The "manipulations" of members of the occupation forces with Allied military currency brought substantial losses to some of the Allies, especially to the U.K. Treasury, but these losses should hardly be credited as reparation payments by Germany. The removal of rails would have to reach the fantastic figure of about 15 million tons of steel, if it were to correspond to the value quoted by the author; actual removals must have been less than one-tenth of that amount.

The author's valuation of corporations taken over by the Soviet Union without physical removal from Germany is the only figure in his list which appears to be approximately correct. The value of all industrial enterprises in prewar Germany has been estimated at 24 billion reichsmarks, of which around one-fourth was located in the present U.S.S.R. zone of occupation. Assuming that additions made after 1938 were about balanced by destruction during the war, the value of the industrial enterprises in the Soviet zone would be around 6 billion reichsmarks. Since it is widely believed that about one-fourth of these enterprises has been taken over by the Soviet Union, the value of the Sovietized industries would be around 1.5 billion reichsmarks.

The author's data on removals of industrial equipment are more difficult to judge, especially as far as the Soviet zone is concerned. The value of industrial machinery and other equipment in prewar Germany has been estimated at 15 billion reichsmarks, of which about one-fourth, or 3.75 billion, was located in the present U.S.S.R. zone. If reports are true that about 40 per cent of the entire machinery has been removed, the value of the removed equipment would be 1.5 billion. The value of machinery in the French zone (excluding the Saar) was about one billion reichsmarks; if 40 per cent of that equipment has also been removed—which probably is too high a ratio—the value of the removed equipment would be around 0.4 billion, or one-third of the figure quoted by the author.

Removals from the U.S. zone are scheduled to reach a total of 0.24 billion reichsmarks; so far, however, equipment worth only about one-half of that sum has been removed. The corresponding figures for the U.K. zone are not available with the same exactness, but comparing the volume of tonnage in question, the value would be probably two and one-half times the value of

removals from the U.S. zone. Thus, removals from the combined U.S.-U.K. zones so far have reached hardly more than 0.4 billion. The author complains that the official evaluation underrates the true value of the removed equipment; there appears to be some justification for that claim, but it is unlikely that the true value was more than twice the official figure. In that case, the total value of the removals from the U.S.-U.K. zones still would be only 0.8 billion, or less than one-fourth of the figure quoted by the author. Assuming that the figure for Berlin is similarly exaggerated, total removals from all zones would amount to about 3.2 billion reichsmarks.

The cost of removal appears much too high (two and one-half times the corrected value of the removed equipment). Moreover, it seems doubtful whether it should enter the list at all. From the creditor's point of view, the value of a piece of machinery is not affected by the question whether it was standing ready for delivery in a German shop or had to be laboriously dismantled and put together again. For the reparation debtor, however, the cost of removal may be so high in some cases that it would have been more economical for him to buy an identical piece abroad or to produce it domestically rather than to dismantle an existing plant. In these cases, he may be right in asserting that he should be credited with the cost of removal. It is unlikely, however, that such conditions exist in the majority of all cases: in so far as the removed equipment consists of war material which Germany would have to destroy even if no reparations had to be paid, the amount to be credited on reparation account under that heading would consist only of the difference between the cost of removal and the cost of destruction. In any case, the liberal estimate of removals from the U.S.S.R. and French zones, and the upward adjustment of the value of the equipment removed from the U.S. and U.K. zones presented in the preceding paragraphs should suffice to take care of that item.

A similar problem exists in the case of the compulsory export of coal and timber. The author concedes that by and large exports of these raw materials have been paid for at world market prices, but he asserts that they might have been used more profitably within Germany. Under normal conditions, the author's claim certainly would have to be disregarded: a debtor compelled to replace some broken eggs cannot claim to be credited with the value of the chickens which he might have hatched in the course of time. In the present state of dislocation of the world economy, the assertion that world market prices do not fully represent the "true value" of the goods, cannot be brushed aside so easily. The author forgets, however, that the exports of coal and timber resulted in foreign exchange proceeds, which in turn made possible the importation into Germany of vital raw materials.

The author's calculations of reparations out of current production are difficult to follow. It seems to be true that not only the Russians but also the French have exacted such reparations, the latter mainly by undervaluing exports from, and overvaluing imports into, their zone of occupation. In view of the low level of the foreign trade of that zone, however, the total value of French reparations for the period from the beginning of the occupation until the end of 1947 probably was not higher than 0.2 billion reichsmarks.

The bulk of reparations out of current output has been exacted by the Soviet Union. In view of the lack of data on the foreign trade between the Soviet Union and the USSR zone of occupation, an exact computation of these reparations is impossible. It seems plain, however, that the figures quoted by the author are too high. Industrial production of the U.S.S.R. zone—which constitutes the basis of most reparation shipments—probably has not been higher than 50 per cent of 1936, *i.e.*, at an annual rate of 4 billion reichsmarks. Assuming that as much as one-half of the total output has been used for reparations, the total for the period from the beginning of the occupation to the end of 1947 would, at most, reach 5 billion reichsmarks. This figure means some double counting since it includes the output of the Sovietized corporations, the value of which has already been counted as reparations. On the other hand, some reparation deliveries of agricultural produce may have taken place so that the total was perhaps not very different from the figure just mentioned. The author derives a higher sum merely by adding together commodity deliveries and money payments, and in respect to the latter by switching from reichsmarks of 1936 purchasing power to current reichsmark figures.

Altogether, a list of German reparation payments thus should include only the following items at the following approximate values:

		Billions of Reichsmarks (at 1936 prices)
Confiscated foreign assets		1.5
Confiscated merchant marine		0.2
Confiscated patents		0.1
Removed rails (mainly U.S.S.R. zone)		0.1
Sovietized corporations		1.5
Removed industrial equipment:		
U.S.S.R. zone	1.5	
French zone	0.4	
U.S.-U.K. zones	0.8	
Berlin	0.5	3.2
Reparations out of current production:		
U.S.S.R. zone	5.0	
French zone	0.2	5.2
Total		11.8

The total of 11.8 billion reichsmarks, of which probably 8.7 billion (including the share of the Soviet Union in reparation removals from the Western zones) went to the Soviet Union, certainly is not a negligible figure, representing almost 4 per cent of the present German national wealth as calculated by the author, and about 30 per cent of the estimated annual German national product in 1947-48. It appears very small, however, if it is compared with the reparation claims of the Allies or even with the losses suffered by Germany during the war. Moreover, the amount that went to the Western Allies actually is smaller than the value of goods distributed in the U.S.-U.K.

zones of Germany by the two occupying powers for the prevention of disease and unrest. The author does not mention this offsetting factor.

The author's computation obviously is meant to impress the reader with the inequity of asking for further reparations. Actually, the exaggerations of which the author is guilty destroy the validity of his argument. Compared with the sum of 177.75 billion, a further burden of 15-30 billion reichsmarks, which would correspond to the Soviet demands for reparations, would seem relatively innocuous. If the figure of 11.8 billion, however, is taken as a basis for comparison, the Western powers appear justified in opposing the Russian demands as excessive from the point of view of survival of the German economy.

In a remarkable review, the London *Economist*[3] has likened the report to *Mein Kampf*. This comparison does an injustice to both Mr. Harmssen and the late Mr. Hitler. *Mein Kampf* was frankly the work of a fanatically extreme nationalist: it was a call to a new war of revenge and aggrandizement. Mr. Harmssen, a prominent member of the Democratic People's Party of Bremen, certainly would reject with utmost sincerity the accusation of being a nationalistic warmonger; he certainly believes his work to be an impartial statement and analysis of facts. Just for this reason, the report is far more disquieting than the appeal of an outright nationalist would be. It shows how the mind of a moderate and responsible German still is distorted by the effects of nazi rule and defeat, and how difficult it is for him to judge the problems of his country in their proper relation to the outside world. This attitude indeed represents a serious obstacle to the reintegration of Germany into a new Europe.

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[3] *Economist,* March 13, 1948, pp. 410-411.

Der Vierte Fuenfjahrplan der Sowjetunion, 1946-1950. By S. N. PROKOPOVICZ. (Zurich-Vienna: Europa Verlag. 1948. Pp. 150.)

Professor Prokopovicz is the dean of Western economic writers on Soviet Russia, and whatever comes from his pen merits serious attention. Nevertheless, the present book is somewhat disappointing. The reader will not find in this study (the title of which does not describe its contents too adequately) any extensive analysis of the current Five-Year Plan. A good deal of the book is concerned with Russia's economic development in the interwar period and offers little more than a summary recapitulation of an earlier comprehensive book by the same author.[1] In some cases, as for instance in the discussion of retail trade and turnover tax (pp. 109-10), the text has been almost bodily lifted from the previous publication. The author does not attempt to link the past with the present, and his emphasis on the former thus seems misplaced.

The first chapter, in which Professor Prokopovicz describes the economic situation in Russia at the end of the recent war, is by far the most interesting

[1] S. N. Prokopovicz, *Russlands Volkswirtschaft unter den Sowjets* (Zurich-New York, 1944).

portion of the study. The author presents there (pp. 11-12) an estimate of the Russian population at the beginning of 1946, prepared on the basis of data concerning persons eligible to vote at the general election in 1937 and 1946; and of data concerning the number of students in elementary and secondary schools. The resulting figure for the 1946 population of 180.5 million is surprisingly low. It implies, as the author points out, a net war loss of almost 17 million. It should be recalled that Stalin spoke of seven million persons whose deaths were directly attributable to the war.[2] If this statement is correct, Professor Prokopovicz's figure means that, over the war years, deaths from causes other than those mentioned by Stalin, exceeded births by about 2.5 million annually. Losses of such magnitudes are difficult to accept, particularly if viewed against the background of the prewar annual net increase in population which was well in excess of three million a year. The trouble with the author's estimate presumably lies in his assumption of a constant ratio in 1937 and 1946 of those eligible to vote to total population, which involves corresponding assumptions with regard to the age structure of the population and the share in it of those who for political or other reasons were excluded from voters' lists. There is, moreover, the problem of the comparative efficiency used in preparing voters' lists in the two years under review. Nevertheless, Professor Prokopovicz's estimate opens up an interesting field for discussion and is particularly welcome in view of the widely accepted figure (for the 1946 population) of 193 million which stems from an ambiguous Soviet statement.[3]

The chapter, in addition, contains a good deal of statistical information for 1945 on output, livestock numbers, railroad transportation, and other magnitudes, most of which are very conveniently tabulated (pp. 8-9), together with comparable figures for earlier years and the plan targets for 1950. Because of the Russian method of issuing many postwar statistics in the form of percentages of the preceding year, such a collection of absolute data for a postwar year is most important. It is, however, very unfortunate from the point of view of students in the field of Russian economics that in all these cases the author does not indicate the source or explain the derivation of his figures. This is a very serious deficiency. It is not, of course, a question of academic window dressing. The point is that in a field where information is so scarce and so ambiguous, the reader must be given the opportunity of descending to the sources or of forming for himself an opinion on the reliability of the estimates presented. This reviewer, for instance, considers inordinately high the author's 1945 figure of 14.5 million (metric) tons for output of pig iron; obversely, the figures on the 1945 bread grain output seem too low. In default of any explanatory remarks no reconciliation is possible. No one will wish to dismiss lightly a figure given by so eminent a scholar, but no one can accept data on the Russian economy the nature of which is not disclosed.

The author volunteers a few cursory remarks in appraisal of the current Five-Year Plan. He says (p. 17) that "the execution of the plans for the year 1946 and the first six months of 1947 shows that with regard to the area sown and the aggregate industrial output the plan targets for 1950 could

[2] *Cf.* Pravda, March 14, 1946.

[3] *Cf.* Pravda, January 22, 1946.

be not only attained, but even exceeded." He adds that "on the other hand, the Plan apparently will not be fulfilled with regard to livestock and railroad transportation." Elsewhere (p. 27), however, Professor Prokopovicz speaks of the grave war losses and the devastating effect of the war upon the quality of manpower, and comes to the conclusion that the volume of investment and the growth of national income which are foreseen in the current Five Year Plan are greatly exaggerated and will not be attained. The two statements perhaps can be reconciled, but unfortunately Professor Prokopovicz does not attempt to do so.

There is not much to say on the remainder of the book. The chapter on Economic Planning in Soviet Russia is diffused with observations on developments in capitalist countries and, except for the last four lines, does not refer to the present but contains observations based on the interwar experience in Russia. Similarly, in the rather long chapter on agriculture, only the brief discussion of the pertinent postwar measures of the Soviet government is directly related to the current Five Year Plan.

The last chapter covers a wide variety of topics: industry, transportation, retail trade, currency reform, standard of living, and factory legislation, but offers little that is new. Two points, however, may be worth mentioning. Professor Prokopovicz notes that from the October Revolution until 1950 the railroad mileage of the Soviet Union will have grown by only 75 per cent. He compares this rather moderate expansion with the rapid growth of industry over the same period and speaks of a disproportionality which he attributes partly to scarcity of steel and partly to faulty planning. A fuller discussion of this interesting suggestion would have been very much in order.

The second point has perhaps only negative value. In discussing the currency reform of December, 1947, the author frankly acknowledges his inability to provide an estimate for the volume of currency issued during the war. In view of the various attempts in this direction, Professor Prokopovicz's statement may well serve as a warning. He reiterates it once more in an Appendix which is devoted to a review of a recent book by Voznesevski on the Soviet War Economy. This is an interesting discussion of Voznesevski's book, but I believe Professor Prokopovicz is wrong when (on p. 139) he accuses Voznesevski of using in two different passages two different sets of percentages for the ratios of population and railroad mileage in the German occupied area to the respective Russian totals. Whatever the actual validity of Voznesevski's data, the two sets of percentages cannot be used to cast aspersion on the accuracy of Russian statistics because each of them refers to a different point of time in the course of the German occupation.

Alexander Gerschenkron

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Narodnoye Khozyaistvo SSSR (The National Economy of the U.S.S.R.) (Moscow: Gosplanizdat. 1947. Pp. 438. R. 12.)

This is a collection of articles, editorials, and official pronouncements dealing with the Soviet economy, 1945-47. These items appeared originally in economic journals, newspapers, and other Soviet periodicals.

Economists concerned with the Soviet economy will find the volume a useful one. It brings together in one convenient place the first four postwar communiques of the Gosplan on economic progress during 1946 and the first three quarters of 1947, as well as other basic materials, such as the description of 1946 reorganization of the State Planning Commission. In particular, the articles dealing with various phases of the current Five Year Plan, reprinted from 1946 numbers of *Planovoye Khozyaistvo,* have long been recognized by specialists as adding significantly to our knowledge of that Plan's objectives.

From a more general point of view, this collection probably provides a representative sample of the shorter scientific publications of Soviet economists since the end of World War II, except that it includes no pieces dealing primarily with economies other than that of the U.S.S.R. The remarks made below may therefore have a somewhat wider scope of applicability than this volume alone.

The character of the articles in this volume might well surprise an American or British economist. None of them is "analytical" in the sense in which we use the term. Those dealing with concrete problems are primarily descriptive and hortatory. Those few concerned with theoretical problems are in the main citations and restatements of the writings of Marx, Engels, Lenin, and Stalin. Even simple correlation or time-series analysis is not employed in the articles reproduced from technical journals, let alone newspapers. In all the articles there is a studied effort to avoid originality or any suggestion of variance with officially approved doctrine.

While many of the articles in this volume do add to our knowledge of the Soviet economy, the amount of such knowledge is limited by the policy of secrecy regarding economic information followed by the Soviet regime. Nowhere in this volume, for example, will the reader find any precise statement of say 1946 Soviet national income, Soviet steel production, Soviet grain output, or any similar key economic magnitude which is readily available for other major industrial nations. Gosplan communiques abound in statements of percentages, whose bases, however, have never been published. Soviet economists' writings here do give occasional clues to the major magnitudes of the economy, but the reader of this volume soon realizes that the authors are as concerned with withholding information as with imparting it.

A more serious problem, however, is that sometimes the writers in this volume actually attempt to impart misleading impressions regarding the economic situation of the U.S.S.R. Thus B. Sukharevski, on page 238, argues that conversion of plants from war to peace production in 1946 led to increased production for heavy industry. He cites Gosplan figures showing increased output of certain groups of commodities in 1946 as against 1945. The unwary reader might well be forgiven the conclusion that in 1946 Soviet industry, or at least Soviet heavy industry, had increased its production as compared with 1945. Actually, as this writer has shown elsewhere,[1] reconversion caused a sharp drop in Soviet industrial production in 1946;

[1] *Cf. Journal of Political Economy,* October, 1948.

most or all of which must have occurred in heavy industry.

A. Bolgov, in his article on collectivized agriculture, gives an overoptimistic statement of Soviet collective farms' independence of natural conditions—an error which probably would not have been made if his article had appeared in late 1946 rather than as it did in early 1946, before that year's disastrous drought. His citation of statistical data to show the rapid increase of productivity and production after collectivization may impress one unfamiliar with Soviet economic history, but seems much less impressive to anyone who notices that this writer picks as his base the early 1930's after the tremendous losses suffered during the struggle of the kulaks against forced collectivization (pp. 152-53).

These examples might be multiplied, but it seems more important to point out why part of Soviet economic writing is deliberately written to mislead readers. This writer would suggest that the main reason for this phenomenon is that Soviet economists are not and cannot be independent scholars seeking to ascertain and publicize the truth. Soviet economists, like all other members of that nation's intelligentsia, are simply servants of the state, compelled to serve that state on pain of loss of position or liberty or both. Professor Varga's recent demotion is a case in point. Consequently, Soviet economic writing must reflect the propaganda objectives of the state. Sometimes these propaganda objectives center about the improvement of poor performance in some sector of the economy. In such cases, Soviet economists will describe such poor performance, sometimes painting an overly black picture to stimulate improvement. More often, however, in the past year or two, the chief Soviet propaganda objective has been to paint an idyllic picture of the U.S.S.R. which can be contrasted with an overly black portrait of the United States, Great Britain, or other nations not in the Soviet bloc. Unhampered by any full disclosure of key statistical information, Soviet economists have great freedom to describe their economy in unrepresentative or perhaps even completely false terms. No reader can properly evaluate this volume or other contemporary Soviet economic writing who does not bear in mind this danger.

HARRY SCHWARTZ

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China's Economic Stabilization and Reconstruction. By D. K. LIEU. (New Brunswick: Rutgers Univ. Press. 1948. Pp. viii, 159. $3.00.)

National economic planning has become one of the most engrossing of postwar activities all over the world. Even in countries like China, where political and military conditions are so unfavorable to an integrated and sustained program, there is no dearth of plans or planners. One of the characteristics of planning in China, as in some other relatively backward countries, has been a technologic bias, a tendency to think of "development" chiefly in engineering terms. At its worst, this bias creates a picture of scattering so many factories, so many TVA's and the like over the countryside, to the neglect of the essential economic problem of allocating scarce

resources. Planning of the primarily technologic kind operates on the unconscious assumption of plentiful resources, leading to the unfortunate implication that nearly all lines can be pursued, and that all goals can be achieved, if not simultaneously, at least within a short time. This bias may explain in part why plans of this kind can and do multiply, offering variously appealing but equally inept guides to procedure.

Planning difficulties of another sort are encountered in China because estimation and forecasting problems, troublesome enough in advanced economies, are aggravated by the vast size and diversity of China, the lack of reliable data, the pluralism of semi-independent economies (independent functionally as well as regionally), the historic dependence upon foreign capital and personnel and upon the remittances of overseas Chinese. All of these basic difficulties are compounded now with a runaway inflation and an exhausting civil war. A plan for China must therefore ensure stability as a prerequisite for economic development, but at the same time the prevailing lack of development is a serious obstacle to stabilization.

The present volume, *China's Economic Stabilization and Reconstruction,* is the work of D. K. Lieu, one of China's outstanding economists and latterly Commercial Counselor of the Chinese Embassy in Washington. It is one of the most comprehensive recent treatments of China's basic economic problems. Less penetrating perhaps than H. D. Fong's analysis of the long-run industrial possibilities (*The Post-War Industrialization of China,* National Planning Association, 1942), Mr. Lieu's book attacks a broader range of issues. Among studies by American economists, the pamphlet by Arthur N. Young, former Financial Adviser to the Chinese government, (*China's Economic and Financial Reconstruction,* The Committee on International Economic Policy, 1947), provides a more technical analysis of the immediate problems of China than is offered by Mr. Lieu, but does not go as far into the realm of long-run potentialities or concrete recommendations.

The first third of Mr. Lieu's book is devoted to long-range issues, the remainder to current problems. After outlining some basic characteristics of the Chinese economy, the author considers alternative developmental objectives, among which he places his stress on higher standards of living. As to fields for development, Mr. Lieu concerns himself broadly with agriculture and industry, concluding from a rather sketchy survey of the agricultural outlook that China should not give major developmental emphasis to this field. Another section contrasts totalitarian planning with a mixed economy; the author rejects the former for China, and urges regional planning and "key-factor" controls. Some brief comments on aspects of agrarian improvement and industrial growth conclude this portion of the book.

The discussion of the current crisis begins by indicating the wartime origins of many of the trends. A description of the inflation (to mid-1947) is followed by a review of the attempts at inflation-control, and this leads to the author's positive suggestions. Of these, the most unusual is a proposal for an extensive tax-in-kind, to be supplemented by other more conventional

measures, but in the final analysis Mr. Lieu falls back upon foreign assistance. The last topic is China's balance-of-payments crisis and the failure of recent attempts at alleviation, indicating once more the indispensability of foreign assistance.

Mr. Lieu's approach to China's economic troubles is many-sided and sober. No monomaniac, he takes a mildly liberal tone, keeps his eye on practicality, and is inclined to prefer gradual and piecemeal solutions over any grand strategy dogmatically conceived. Thus he sets almost no goal figures, and rejects five-year planning *à la russe*. At the same time, his book suffers from a certain looseness and vagueness just at the points where an over-all view is necessary. To some extent, this may be attributed to the difficulties of Mr. Lieu's official position, since he has been for years connected with several agencies of the Chinese government as a technical expert. But in large part, the looseness and vagueness arise from the difficulties of making over-all comparisons of costs and returns for a country like China. This becomes most evident in Mr. Lieu's constructive proposals.

For example, his scheme for "key-factor" planning aims at encouraging the production of commodities which he designates in terms of minimum domestic consumption needs. Thus the scheme turns out to be a self-sufficiency program, despite the author's explicit rejection of such intention. He is apparently aware in theory of the drawbacks to such procedure for the development of China as well as for the emergence of an integrated Asiatic and international economy. But he is carried away by the actual conditions and forces: China's unhappy past experience in international commodity and capital markets, the prospect for continuation of trade barriers and fluctuations despite the efforts of I.T.O., etc., and the pressure to link the long-range program of development with the immediate famine of consumption goods.

Something of the same dilemma runs through Mr. Lieu's recommendations against inflation. He has examined the various measures usually proposed and is aware of their limitations in the Chinese context; in particular, he regretfully abandons the hope of much benefit from a steeply progressive income tax (he omits consideration of a capital levy), in view of the difficulties of enforcement when rapid inflation is added to the traditional Chinese practice of conducting most business without resort to modern banking and accounting. But, unfortunately, similar limitations apply to the author's proposal for taxation-in-kind on a wide range of raw materials and finished goods to be sold by the government at prices below the market level. It is possible that such a measure might actually stimulate price inflation, by removing large quantities of goods from circulation during tax-collection, warehousing and distribution, and by encouraging the withholding of commercial stocks while the government was unloading. More important is the fact that the tax would contribute little if anything toward the basic requisite of a larger total output of goods. In consequence, the author is compelled to fall back on increasing the supply of goods through imports, and for this there is no real alternative to extensive American aid.

Mr. Lieu does not expect that substantial reparations will be forthcoming

from Japan and, in contrast to many of his countrymen, he points out that Japanese capital equipment is largely unsuitable to China in view of the costs and other difficulties of transfer and use. But in turning to American assistance, Mr. Lieu fails to discuss the factors of domestic and foreign policy which limit this country's ability and willingness to provide goods in the huge amounts needed by China; nor does he give adequate attention to the capacity of the Chinese economy to absorb such a flood of goods if it were forthcoming.

In his approaches to the problems of planning, Mr. Lieu displays a sophistication which is all too rare among economists and government officials in the relatively undeveloped countries. Nevertheless, so intricate are the problems of China that, as with many other planners, his prescriptions for China sometimes fall into the very pitfalls which his diagnosis was careful to avoid.

EDWIN P. REUBENS

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The Industrial Future of Great Britain. A series of lectures arranged by the University of London and the Institute of Bankers. (London: Europa Publications. 1948. Pp. xx, 208. 15*s*.)

The importance of Britain's industrial progress in the reconstitution of a stable, prosperous world economy gives this collection of lectures wider interest than it otherwise would have for American economists. It offers a good, although rather general, survey of the present position and prospects for British industry, similar to, but by no means as good as, the Liberal Industrial Inquiry's survey in 1928 of *Britain's Industrial Future.* It includes fourteen essays, some on individual industries (fuel and power, agriculture, iron and steel, building, inland transport, shipping, textiles), some on individual aspects of the subject ("Finance of Reconstruction," "The Export Drive," "Impact of the War," "New Industrial Development and Export," etc.), by as many authors, including Professors T. C. Ashton, G. C. Allen, P. Sargant Florence, and Messrs. F. W. Paish and S. R. Dennison.

Unfortunately, the volume has many flaws, some of them discussed by Paul Bareau in his brief introduction. Many of the essays are excessively general, "popular," and inadequate. One offers the conclusion that "British agriculture can, on the whole, be rated as efficient"—because wheat yields per acre are considerably above those in Ontario, and so are "standards of husbandry in terms of neat farming and the maintenance of soil fertility" (p. 61). An economist will recognize that such observations are useless as guides to policy, and do not face the fundamental issue of the appropriate economic future for British agriculture. This and other chapters ignore also the problems created by the decline of competition in British industry. For example, the Economic Director of the British Iron and Steel Federation has only praise for the "planning" programs undertaken by that organization, under government auspices, which leave the detailed management of individual companies to private enterprise—ignoring the fact that such planning has consisted largely of price fixing and limitations on freedom of

entry of new firms, new capacity, and competitive foreign products. The industry representatives who delivered the lectures on textiles and shipping were guilty of similar oversights. Finally, it is to be regretted that there is no adequate discussion—but only a few obiter dicta, all against—of the case for and against some of the major economic policies of the Labor government.

Many of these deficiencies are, however, corrected in other essays. S. R. Dennison calls attention to the danger of attempting reconstruction by simultaneous expansion and indiscriminate mechanization of all industries, without regard to the dictates of comparative advantage. F. W. Paish and Robert Shone, in the iron and steel chapter, both stress the necessity for choosing among alternative uses of scarce resources, underlining the need for a higher level of national saving and investment—though it is cause for regret that R. F. Harrod was not invited to defend the point of view of his recent book, *Are These Hardships Necessary?* And both Mr. Dennison and Sir Jonah Walker-Smith, the latter in an interesting discussion of the building industry, make perfectly clear the dangers of industrial rigidity inherent equally in private monopoly restriction and unimaginative government planning.

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Economic Systems; Postwar Planning

Freedom and Order: Lessons from the War. By EDUARD HEIMANN. (New York: Scribner's. 1947. Pp. xiv, 344. $3.00.)

Professor Heimann's book is an attempt to interpret the present difficulties of western civilization and to relate them to the totalitarian challenge of nazi socialism and Soviet communism. He finds the root of the problem to be the attainment of a proper balance between individual freedom and a stable, orderly, yet not tyrannical political society. Classical liberalism fails by sacrificing order to unrestricted individual liberty, while communism and fascism sacrifice the individual to an absolutistic political order. The great need of the times is a workable principle of social justice where liberty and order may be balanced in a tolerable compromise between both grand extremes. Heimann finds this principle in the teachings of Christianity, particularly in the Petrine doctrine of foremost loyalty to God.

Classical liberalism presumed that order would be the automatic result of the rational pursuit of self-interest under the impersonal coordination of competitive markets. It overstressed man's rationality, and in turn relied for the control of the darker side of his nature upon the separation of political powers, the reservation of a large area for private (commercial and non-commercial) activities free of state intrusion, and again, the force of competition. For Heimann, competition has generally given way to "monopoly" (undefined), and the whole ingenious system has broken down. Mass unemployment, class privilege, and short-sighted resource exploitation are the results.

In its larger aspect, the failure to balance liberty with order arises from

lack of a universal ethic for the guidance of affairs, and consequently a relentless preoccupation with technical interests and private matters. For proof of monopoly, the author cites technological progress and the large firm. He attributes mass unemployment to the uneven nature of technological change and high dependence of prosperity upon a high rate of investment goods production. The author sees increasing "saturation" in particular markets and believes investment opportunities are steadily contracting, although neither problem is considered critically. He also accepts Rodbertus' thesis that enterprise capitalism depends upon export markets and is thus driven to economic imperialism. Private enterprise also fails to exploit natural resources with proper regard for the future. Thus classical liberalism fails to yield a stable and just social order.

Given this conception of the issues, Heimann offers his own version of the good society and at the same time assesses the two totalitarian alternatives. His solution is neither fascist nor communist. He is an advocate of a pluralistic or mixed economy that combines elements of private with state enterprise and strives for a stable equilibrium of group economic interests. The central principles of reform embrace a shift, by means of further income redistribution, to a high-consumption (low capital-formation) economy, backed up by government housing, TVA projects, and government-controlled foreign lending. He does not advocate price control, nor does he rely naïvely upon unionism to raise real wages, but neither does he face the problem of how to make interest groups responsible to the public interest, or how to deter them from the blind pursuit of inflationary policies. As a whole, his approach may justly be termed increasing state direction and intervention, in several respects similar to the rather pragmatic program of the British Labour Party. Yet ultimately Heimann is dubious about technical or materialistic solutions to the problems of the day, for he soberly views our basic problem as a moral one that calls for a revival of Christian faith and belief. Still, the linkage between Christianity and the ends of public policy (not to mention means) remains nebulous and undefined in his discussion. The secular state that emerged with the western Renaissance appears to be the basis of our troubles: what is required, paradoxically, is an increase of statism, but leavened by a resurgence of the Christian spirit.

Now what about the alternatives, whose tiresomely reiterated and supposed inevitability Heimann rightly denies? Nazi fascism had its immediate cause in the failure of German political democracy to furnish a stable order after 1930. Back of this failure lay certain longer-run influences in German history. One was the failure of the German bourgeoisie to carry through a liberal revolution and so attain political dominance. Another was the tendency of German individualism after 1848 to lose itself in a dynamic and reckless nationalism and state-worship. Finally, there was the peculiar permissive contribution of the German version of Lutheranism: (1) that each is in duty-bound to give unreserved loyalty to the political authority; and (2) that acts of those in political power are by nature beyond the scope of moral judgment. The state is a divine grant of monopoly in the means of violence, to control the inherent sinfulness and destructive egoism of man.

Socialism proceeds from the thesis that it alone is the means of complete fulfillment of the democratic idea, which thesis Heimann properly rejects. According to the argument, "bourgeois" democracy rests upon personal ownership and control, broadly distributed through self-employed units of production, which is overthrown *in toto* by an asserted all-embracing technological trend towards the large-scale firm. The outcome is a *régime* of class division and privilege, and separation of the workers from the means of production. Only collective ownership can establish a rational relationship to collective dependence in work. Heimann finds, however, that the technological trend is not all-embracing, nor are all skills tending to be levelled out in an overwhelmingly large industrial, wage-working proletariat. The Marxian *schema* quite misses the point, as to diagnosis or solution. And while Heimann thinks that socialism has the advantage over enterprise capitalism in long-run and "rational" planning, he denies that this is an exclusive advantage—in other words, a pluralistic society can do the same.

Part of this analysis also applies to Soviet communism. Here the author continues to maintain his deep sense of fairness and his scholarly sincerity, although dealing with the most bitterly controversial subject of the times. In favor of the Soviets, he finds (1) the use of planning rather than the market as the coordinator of activity; (2) the formulation of a long-run view; (3) the avoidance of fluctuations; (4) the attainment of a communal conception of work; (5) the program of cultural autonomy; and, (6) the realization of ethnic, racial, and economic equality. Heimann also believes that a pre-industrial society like Russia requires an authoritarian government for transition to advanced industrialism, and that probably in a half century or so that government will give way to a pluralistic democracy. On the other "side," he finds: (1) overcentralization and excessive bureaucracy; (2) serious errors in capital accounting, pricing, and income distribution; (3) ruthless brutality in slavish adherence to a dogmatic conception of the inevitable course of history; (4) purges, mass political trials and executions, and mass slavery in prison labor camps. He also believes that an equitable compromise between Russia and the West is possible, that the issue of right and wrong is impossible to decide, that the *régime* respects the cultural and national autonomy of its subject minorities and satellites, that its expansion is dictated only by military-political considerations, and that the final fate of Poland was preferable to anything proposed by the vanquished Polish groups.

The remainder of the book is an essay on social justice. Democracy requires an explicit formulation of a conception of the common good. The social sciences have failed here by becoming enmeshed in a tangle of exclusively technical and empirical problems in an endeavor to model themselves upon the natural sciences. Salvation lies in a rediscovery of Christianity, but the author is careful not to identify this proposal with the doctrines of any extant church.

Upon examination, Heimann's primary thesis represents, as he indicates, one of the major themes of Max Weber's notable inquiries: the lack (in the formal sense) of a detailed and unitary system of values in the pluralistic, technical, rationalistic, and quasi-individualistic societies that have dominated

western Europe since the Renaissance. In this period, two important developments have occurred: (1) the loss of an institutional scheme based upon supernatural sanctions, wherein society was regarded as an organic whole with functionally adapted parts—an interrelation central to the sociological speculations of St. Simon, Comte, and Durkheim[1]; and, (2) the emergence of the secular state and the secular economy, marked by increasing organizational complexity, wherein the problems of choice have increasingly become technical ones, morally responsible individuals have increasingly been displaced by the technical expert and the political manipulator, and questions of the ends of human conduct have become exclusively private and bereft of orthodox guidance. In the midst of this situation, what Heimann wants is, foremost, a revival of Christianity as a supposedly self-consistent and universal social ethic; and, secondarily, a program of specific economic reforms not unlike the New Deal but with somewhat greater emphasis upon the socialization of particular industries.

In comment, I should like to make several observations. First, despite the rationalistic tendencies referred to, liberal society does possess a tacit system of values and is not, in my opinion, what Heimann designates a moral failure. The key to this system is the supreme worth of the individual and his free development within a system of rules intended only to check the destruction of society itself and to prevent the emergence of political tyranny or political and religious orthodoxy. Allied to this premise are the principle of decentralization of initiative (particularly private enterprise and coordination through the market) and the principle of voluntary associations in interest-groupings outside the aegis of the national state. Under this system, political, civil, economic, and cultural liberties have been or are being won, with material benefits unrivalled by other civilizations past and present. If in the past we have failed to keep economic fluctuations and unemployment within bounds consistent with a flexible and progressive economy, that does not mean that it is impossible to do so. Furthermore, the so-called "crisis-proof" Soviet economy (if it is) has only solved the problem of employment security at the expense of police methods which have destroyed fundamental liberties in all spheres and have even placed security of one's life in complete jeopardy. It is time for western liberals to quit apologizing for their own way of life when confronted with this supposedly superior alternative.

Second, the peoples of these free societies have shown themselves on the whole to be morally responsible and fundamentally decent, notwithstanding wrongs in racial and colonial matters, which, significantly, are largely acknowledged and under slow redress. At no time in the present century has it been possible to get these peoples to initiate aggressive warfare: both world wars arose with the activities of absolutist governments.[2]

[1] Machiavelli and Hobbes were also concerned with the problem of how to hold together a secular society based upon the egoistic pursuit of material interests.

[2] It is noteworthy that, while the U.S.S.R. is now engaged in a power play involving the threatened starvation of two and a half million citizens in Berlin, the liberal democracies are struggling to feed them. Yet the Soviet government claims, along with its American apologists, moral superiority over these nations, no one of which would dare embark upon such an undertaking.

Third, I find myself questioning Heimann's optimistic expectation that Russia will ultimately become a pluralistic democracy, or that her territorial expansion has no economic motivations. Heimann's position rests partly upon his belief that the Soviets have fostered private peasant holdings and have abandoned total proletarianization, both of which are doubtful. Moreover, totalitarian states cannot by their nature tolerate civil and cultural liberties or the formation of independent and competing voluntary associations. This is a matter of political structure and power, not of a low initial economic level. As for territorial expansion, two things must be observed. First, there are the Soviet hunger for goods and correlative official demands for enormous reparations, plus outright seizures and domination of satellite states in matters of production and trade—all of which may vulgarly be called economic imperialism backed by political duress. Moreover, it is at least possible that this program of expansion is not limited and defensive but unlimited and designed to carry out a well-documented program of world communism. The future will decide which hypothesis is correct, but until then we cannot ignore the less attractive one.

Fourth, I believe that Heimann concedes too much to economic planning at the expense of the price system, though I would agree regarding short-sighted wastage of exhaustible resources and the neglect of certain collective ends. Centralization of the power to make investment decisions (modern socialism) neither abolishes uncertainty nor assures more reliable criteria for determining directions of development or the optimum size of industries. In fact, I doubt strongly that central planning does abolish fluctuations (whose effects may be concealed), because it is likely to be accompanied by inflationary pressure and hence random and multiple bottlenecks, and because of too rapid building followed by periods of slackened demand. At the same time, the pursuit of Heimann's objective of still greater income equality, together with his desire for a high-consumption economy, seems to me to clash with his parallel aim of a domestic and world-wide increase in standards of living. The rise in standards achieved by capitalism after 1800 was based upon capital formation—uneven over time but high as a secular average. These things go together. Events after 1929 have led most of us to concentrate attention upon oversaving and inadequate investment outlets, suggesting that *for all time* increased consumption depends upon decreased efforts to save. It is time to adjust our thinking to new conditions. If now, in pursuit of more equality and of "high consumption," we are to push further in the attack on saving and capital formation, then given the enormous capital needs of the world, we face credit inflation or a slackening of the secular rate of progress. To me, this kind of policy seems sadly misguided in these times, and perforce unlikely to maintain the rate of broad improvement in material conditions so confidently assumed by those who would like to unite the incompatibles.

Heimann's skepticism regarding the coordinating function of the price system rests upon two undemonstrated and unsupported arguments: that oversaving is a secular condition, and that "monopoly" in product markets has become practically universal. Yet if the term is used with precision, to mean

one producer whose product is free of close substitutes over the long run, it designates a rare empirical condition, one that has not been shown to manifest an increasing trend over time. However, Heimann's conception seems to identify monopoly with large-scale firms, multiple plant firms, financial interest-groupings, or unused capacity—no one of which criteria satisfies a workable definition.

In closing, I should like to state that this is a deeply sincere book, one that points out several weaknesses in our society. It calls for a broad and morally responsible outlook among the social scientists, for that quality of dignity and honesty which led Marshall to cast the economist chiefly in the role of a censor of policy, though certainly equipped with the technical skills to be an intelligent one.

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National Income and Product; Income Distribution; Consumption Statistics

Studies in Income and Wealth. Vol. 10. By Conference on Research in Income and Wealth. (New York: Nat. Bur. of Econ. Research. 1947. Pp. xi, 335. $4.50.)

Since 1936, the National Bureau of Economic Research has sponsored an annual Conference on Research in Income and Wealth. Composed of members from universities, government agencies, and other research organizations, these conferences have stimulated and coordinated research in income and wealth and have brought about during the last dozen years a relatively rapid development of concepts and statistics in this field. It was in significant degree a result of these conferences that American statisticians were able during the recent war to provide meaningful and comprehensive data on the over-all economic position of this country. The value of the conferences lies not only in their bringing together workers in the income field for the purpose of discussing problems arising in their work, but also in the fact that the discussions, as well as the papers, are generally published and hence made available to a wider circle in this country and abroad, in a series of *Studies in Income and Wealth*, of which the present volume is number 10.

This volume includes eight papers, and the discussions on them, presented at the 1945 annual meeting of the Conference. The papers are divided into four groups, of which the first, and to this reviewer the most important, contains a report by Edward F. Denison on the United States-United Kingdom-Canada official agreement on national income concepts and terminology, a paper by Dwight B. Yntema explaining in some detail the change being made by the Department of Commerce in estimating income originating in (or derived from) financial intermediaries, and discussion on these papers by Solomon Fabricant, Morris A. Copeland, O. C. Stine, Jerome Rothenberg, and Clark Warburton.

Although achievement of tripartite agreement on national income concepts is no small accomplishment, many readers of this volume will probably

sympathize with the discussants' adverse criticisms of certain details of this agreement. The decision disturbing to this reviewer most is that to exclude national government interest. Other particularly controversial decisions are the exclusion of depletion charges, the imputation of interest to bank deposits, and the application of the terms "national income" and "national product" to different quantities. Unfortunately, Mr. Denison, in summarizing the tripartite agreement, did not generally attempt to explain the decisions recorded. Perhaps the logical system underlying the new concepts will be presented in detail in the forthcoming Department of Commerce volume on national income methodology and statistics. In the meantime, estimates based on the new concept were issued in a special supplement to the July, 1947 *Survey of Current Business,*[1] published by the U. S. Department of Commerce.

Part II of the volume under review contains an article by Gerhard Colm discussing the general problem of using a nation's economic budget, *i.e.*, national income estimates in the broad sense, as a tool to aid in carrying out a full-employment policy, and an example by Everett E. Hagen (assisted by Mrs. Nora Kirkpatrick) of the nation's budget method in forecasting gross national production and employment during the transition period. The ill-fated nature of these forecasts of GNP and employment is too well known to require summarization here. Mr. Hagen sets forth in detail the nature and extent of the error in these forecasts, but does not despair of the soundness of the underlying method.

In 1945, the American and British governments published a study by the Combined Production and Resources Board of *The Impact of the War on Civilian Consumption in the United Kingdom, the United States and Canada.* This was a pioneer attempt, led by Mr. Copeland, to resolve on a broad scale the difficulties in the way of international comparisons of national income. In Part III of the present volume Mr. Copeland, in collaboration with Jerome Jacobson and Bernard Clyman, illuminates some of the technical problems that arose in this project in a paper that constitutes a valuable adjunct to the C.P.R.B. study. (Editorially, this paper jars one by its use of the terminological monstrosity "manmonths." The least that could be done to this word would be to hyphenate it!) Also included in Part III is a lengthy survey by Loreto M. Dominguez of the national income estimates of some twenty Latin American countries. The article concludes with a discussion of international comparisons of national income which is in large part an elementary comment on the index-number problem. The author computes purchasing-power parities by using a common "basket" of goods based on United States consumption patterns, and then converts the national income estimates to a common basis by means of these parities. The resulting ranking of countries by *per capita* national income would be more convincing if the calculations were also carried through using a Latin American "basket."

In a different category are the two papers that form the concluding Part IV: an analysis of "Savings and the Income Distribution," by Dorothy S. Brady and Rose D. Friedman, and "Resource Distribution Patterns and the

[1] Reviewed in this journal, June, 1948, p. 416.

Classification of Families," by William Vickrey. The former presents an ingenious analysis showing that "variations in the pattern of consumption and savings among groups of families at given income levels" are the result, to a considerable extent, of differences in the level and distribution of income. The authors find from recent sample surveys that, "in general, the smaller the percentage of families in the higher income brackets, the greater the percentage of income saved at each income level" and "raising the general level of income in a community has the effect of increasing the expenditures and decreasing the savings of families at every level." This paper is an important contribution in a field that is still in need of extensive conceptual and statistical exploration. Mr. Vickrey's paper is a demonstration that choice of the income-receiving unit (family, individual, etc.) is one of the determinants of the income distribution pattern, but his suggestion that there is a single all-purpose classification of income distribution data (*i.e.*, by expenditures per equivalent adult) and his failure to consult the recent literature on this subject, rightfully brought him under the fire of the discussants.

Workers in the income field can be thankful for the excellent studies by the Income Conference, of which the present volume is a worthy example, and can hope that the Conference continues and intensifies its work in the fields of income distribution, international comparisons of national income, and national wealth.

CHARLES L. MERWIN

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Business Cycles and Fluctuations

La Lutte Contre l'Inflation et la Stabilisation Monétaire. By GAEL FAIN. (Paris: Payot. 1947. Pp. 177. 200 fr.)

Professor Fain's purpose in this book is to study the causes and cures of one of the two great monetary diseases—inflation. Though his central interest is the French inflation during and since World War II, he devotes the first half of the book to a development of what seems to him the most satisfactory form of monetary theory and to a description of the basic causes of price inflation. Using a form of the income and expenditure theory of aggregate demand and prices, he points out that general price increases result when total spendings—for consumption, private investment, and government purposes—rise relative to the available quantity of goods and services. In elaborating his analysis, he finds several causes of inflation other than a scarcity of goods: (1) Productive inflation—the financing of capital construction through the creation of new money. (2) Speculative inflation—the creation of new money to be lent to speculators to buy and hold off the market either real goods or securities. (3) Fiscal inflation—the creation of new money to finance government deficits if the additional money is not offset by an equivalent hoarding of the means of payment. (4) Salary inflation—the creation of new money resulting from increases in the remuneration of labor not accompanied by a proportional rise in the output of labor

or not offset by a reduction of other cost elements, notably profits. At a number of points he shows how an inflation can be prolonged and aggravated as various groups of workers try, by demanding and securing wage increases, to raise their real standard of living above the levels made possible by the available supply of consumption goods and services. (5) Dishoarding, especially as people fear further price inflation.

All the factors indicated above contributed to the serious French inflation, though fiscal inflation was undoubtedly the prime mover. Professor Fain points out that successful price stabilization requires a maximization of the available supply of goods and services and monetary-fiscal measures designed to reduce the money supply and to prevent further increases in the rate of spendings. To achieve the former, he advocates raising domestic production and achieving for a time an excess of imports over exports through loans or gifts from abroad. On the monetary-fiscal side, the problem is to prevent further expansions of the money supply and to retire some of the redundant money already outstanding. He would do this in several ways: (1) Through loans from abroad. Goods or funds borrowed abroad could be sold for francs which could then be retired. (2) Through a capital levy. (3) Through other taxation and borrowing from nonbank sources.

Professor Fain disagrees vehemently with those who argue that a government deficit is necessarily inflationary and that stabilization cannot be achieved unless tax receipts are at least equal to government expenditures. He argues that the important point is to reduce, or at least to prevent a rise of, private spendings, and that this can be accomplished by borrowing from nonbank sources as well as by taxation. Moreover, he contends that it is unrealistic to expect the government to achieve a balanced budget in the midst of its great and necessary reconstruction program. He is driven to the conclusion that a balanced budget is infeasible as well as unnecessary and that fiscal and monetary stabilization require large borrowings from nonbank sources. But the great practical difficulty with the conventional type of borrowing is this: "How can people be expected to buy large volumes of government securities stated in fixed amounts of francs when the franc has been depreciating rapidly and threatens to continue its depreciation?" To meet this problem, Professor Fain presents his own plan which he has been advocating for several years. He would issue securities stated in terms of "monnaie d'epargne." These would be similar to the "compensated dollar bonds" long advocated by the late Irving Fisher. Their real purchasing power would be maintained at a constant level through adjusting their franc value by an appropriate price index. Professor Fain prefers the use of an index of salaries for this purpose, though he admits that a retail or wholesale price index could be used. Such bonds would not be made available to banks.

This book does not describe in detail either the process of inflation in France or the measures that have been used to combat it. Instead, it deals largely with basic principles and with Professor Fain's own program for stabilization. It is well written and should be of interest to specialists in the field.

LESTER V. CHANDLER

Amherst College

Production Cost Trends in Selected Industrial Areas. By PHILIP NEFF, LISETTE C. BAUM, and GRACE E. HEILMAN. (Berkeley: Univ. of California Press, for the John Randolph Haynes and Dora Haynes Foundation. 1948. Pp. xii, 250. $4.00.)

This study, which was conducted by the Haynes Foundation of Los Angeles, is an attempt to explore trends in cost differentials in six different urban industrial areas. Manufacturing cost trends are examined for the Los Angeles, San Francisco, Detroit, Cleveland, Chicago, and Pittsburgh regions. The data used are primarily those obtained from the Biennial Census of Manufactures for the period 1929 to 1939. Some attention is given to cyclical fluctuations in costs, and an attempt is made in some cases to give reasons for cost differentials. The primary breakdown of industries is between durable and non-durable goods, although within the chapters devoted to these two groups the breakdown is carried to most of the sixteen industries covered by the main Census classifications. Finally, in Chapter V, specific subgroups of industries are considered. These are bread and other bakery products, furniture, paper boxes, newspaper and periodical printing and publishing, paints and pigments, concrete products, structural and ornamental metal work, heating and cooking apparatus except electricity, and aircraft and aircraft parts.

The authors' purpose in undertaking this monograph is a very commendable one. Essentially they undertook to study the variance of costs in an attempt to solve some of the problems inherent in micro- and macro-relationships. It is becoming increasingly evident that both the study of interrelationships among components of the gross national product and the comparative analysis of different areas of the economy can yield fruitful results.

The present study has, however, not managed to solve many of the difficulties of this type of analysis. The reader is faced with a maze of statistics, with very little by way of guide through the maze. The authors state that the book is intended for professional economists, but even the most professional of economists would not find this an easy book to read. A great deal of the statistical material might well have been relegated to an appendix. At the same time, some of the data which have been omitted might well have been supplied. Many of the charts upon which major conclusions have been based are not supported by data anywhere in the book. In an elementary presentation such a procedure would be permissible, but in a research monograph it is unsatisfactory, since anyone wishing to make further analysis along the same line would have to re-compute the statistics from the basic data.

The measures which are used in this study are

(1) $\dfrac{\text{wage earners}}{\text{number of establishments}}$; (2) $\dfrac{\text{valued added}}{\text{wage earners}}$ and $\dfrac{\text{wages}}{\text{value added}}$; and

(3) $\dfrac{\text{cost of materials}}{\text{value added}}$.

The first of these was used to measure differences and changes in the size

of manufacturing establishments in various regions; it is of course the arithmetic average of the number of workers per establishment. But the exact significance of this measure is somewhat difficult to grasp in view of the skewed distribution of establishments by size which exists in most industries, and in view of the differences in these distributions which are found in different industries. For this reason, the arithmetic average seems somewhat inadequate as a basis of comparison.

In the other two measures, value added was preferred to value of product for what the authors say is a very simple reason (p. 10): the use of value of product in the ratios would introduce an additional source of error. Since value of product includes cost of materials, it is argued, this measure would reflect changes in their cost as well as in wages and value added. In some sense or other it is felt that an additional variable would be involved if value of product were used instead of value added.

Such reasoning disregards the fact that value added itself is a residual obtained by subtracting cost of materials from the value of product, and is therefore implicitly related to the cost of materials. The use of value added does not eliminate cost of materials as a variable. Interpreting the second group of ratios, $\frac{\text{value added}}{\text{wage earners}}$ and $\frac{\text{wages}}{\text{value added}}$, as being directly related to labor cost thus can be valid only in a definitional sense. Special conditions would be needed to give significance to these measures, and these conditions are not fulfilled by the data. Considerable dissimilarity exists among industries and regions, both in types of production and in technology, so that labor cost as defined above has little meaning. Finally, with respect to the third measure, $\frac{\text{cost of materials}}{\text{value added}}$, the authors admit that isolation of the cause or causes of its variance is impossible in almost all cases.

From a methodological point of view also, the authors leave much to be desired in the analysis used in conjunction with the above measures. There is an unfortunate habit in this book of computing trends from data for the period 1929 to 1939; in fact this procedure, as the title indicates, is the principal type of analysis employed. It would, of course, be dangerous to compute a trend for a period of this length even if the cycle were of minor significance, and for this particular period the violent cyclical fluctuation makes any trend computations completely unsound. This factor destroys the validity of a number of the conclusions which the authors reach. In particular, the evidence given does not support the conclusions (1) that wages are becoming a larger proportion of value added, and (2) that value added per wage earner is declining. If the data could have been extended to a period of true full employment, the trend line might well have been quite different. In any case, the trend obtained for this period is likely to be largely the result of the shape of the cycle. Since only one cycle is examined and that one is highly skewed, an apparent trend of a specific type will result even though no trend or a radically different trend might be found if a longer period were examined.

In spite of these criticisms, however, this book is a useful contribution to the literature. It is easy to criticize methods and results; but those who open up new fields and attempt positive research merit a great deal of credit.

RICHARD RUGGLES

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Public Finance; Fiscal Policy; Taxation

NOTE: Publication of *Agenda for Progressive Taxation,* by William Vickrey, a review of which appeared in this section in the September number of the REVIEW, was erroneously credited to McGraw-Hill. The publisher of the book is the Ronald Press.

The Impact of the Undistributed Profits Tax, 1936-1937. By GEORGE E. LENT. (New York: Columbia Univ. Press. 1948. Pp. 203. $2.50.)

The 80th Congress was deeply concerned with revenue reduction. It may be that the 81st Congress will be concerned with the more important problem of revenue revision. If so, Professor Lent's study of the outstanding tax unorthodoxy of the 'thirties will be an important guide to the problems of integrating corporate and individual income taxes.

Dispassionate consideration of the undistributed profits tax has been rare. Probably no tax before or since has aroused so much concerted opposition from the business community. With emotions running high there has been a great tendency to choose up sides with respect to the undistributed profits tax, a tendency which Professor Lent is careful to avoid by assembling impressive statistical evidence to support even his most guarded conclusions. The result is an unusually tightly written book, with discursiveness at a minimum.

Professor Lent estimates that the undistributed profits tax was responsible for an increase in dividend payments in the years in which it was in effect to the extent of about one-third more than might be expected from the 1934-42 relationship between profits and dividends. Small corporations increased their dividend payments more than large corporations, in part because small corporations were considerably motivated by the individual income tax liabilities of their stockholders. The law also forced increased recourse to capital markets. Professor Lent finds that about one-third of the new issues of 1936 and 1937 were occasioned by the forced distributions of earnings. This was no particular hindrance to the financing and investment efforts of large corporations with easy access to capital markets. Small corporations were restricted in their investment activities but less than has generally been argued, because these corporations were very often in a position to recall dividends from stockholders in the form of loans or new stock subscriptions. But the evidence suggests that the medium sized corporation, where costs of new security flotation are frequently prohibitive, was sometimes hampered by the law. This fostered a tendency toward concentration in the control of industry.

As for savings-investment effects, Professor Lent concludes that the tax

was paid in good part out of savings (to a greater degree than the corporate net income tax) and therefore tended to bring a more desirable balance in the proportion of national income saved and spent on consumer goods. Similarly, there is considerable evidence that the tax reduced corporate cash balances, but no evidence that the magnitude of total investment was much affected. Professor Lent seems to feel that the tax intensified the cyclical pattern of 1937 and 1938, although he admits that the evidence is distinctly shaky.

Two omissions in Professor Lent's treatment may be noted. First, there is inadequate appraisal of the effect of the tax on the distribution of income. Second, the author omits direct consideration of the effectiveness (or equity) of undistributed profits taxation in overcoming the tax avoidance characteristics of corporate retentions. That is, can an undistributed profits tax impose equivalent burdens on corporations (and their stockholders) that retain net income as compared with corporations that distribute?

The tendencies toward internal financing of corporate enterprise have been increasingly marked since 1937 and 1938. Those who would attempt a better integration of corporate and individual income taxes must decide whether taxation should be employed to restrict internal financing. It may be desirable to restrict the financial independence of corporate enterprise; the tax avoidance inherent in retained earnings may need to be modified. Professor Lent demonstrates that an undistributed profits tax can, with mixed effects, accomplish these objectives.

Jesse V. Burkhead

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Money and Banking; Short-Term Credit

Money, Debt, and Economic Activity. By Albert Gailord Hart. (New York: Prentice-Hall. 1948. Pp. viii, 558. $5.00.)

Although this book has been conceived as a textbook for university students, it is really a well-rounded treatise on money; it is written for grown-ups and will prove educative to most economists and illuminating even to special students in the field. The work is strongly oriented toward policy-making; but, with the possible exception of international finance, it does not incontinently hasten on to conclusions without a firm basis of fact and analysis. Part I covers the chief institutions necessary to the understanding of money, credit, and prices; Part II is devoted to monetary theory; Part III to business fluctuations; Part IV to international monetary relations; and Part V to policy.

Definitions are indeed an individual prerogative and, within the limits of common sense, a matter of taste. Hart's definitions, however, seem to me atavistic and awkward. For him, coins and paper money are "money," demand deposits are "near money," and both together are "cash." To me "cash" seems in ordinary discourse to contrast with sales or purchases "on time"; money, especially in all phrases like "monetary theory," "monetary"

versus "real," etc., includes not only Hart's "money," but also his "near money"; and "near money" would be a convenient term to have left to cover time deposits, redeemable government bonds, and the like. Hart would have to say that he receives his monthly remuneration from the university in near money for conducting courses and seminars in the field of cash theory. This is permissible but weird. On a closely related matter I do not think his usage even permissible. Referring to the gradual shift historically from full-bodied coin to paper money and checks, Hart says that money has come to be more and more ***abstract***. Commoner and more defensible practice would say that even with full-bodied money the ***unit of account*** is abstract. The physical aspect of money, as a medium of exchange, has been increasingly divorced from commodity value.

Part I embraces, within one-fourth of the volume, nearly the whole terrain of the old-fashioned textbook on Money and Banking; and it does so not only adequately but in a fresh and vigorous fashion. Its three substantial chapters explain commercial banking, both as a business venture and as an institution creating money; the nature of government control of banking in both these aspects, including the newest developments in reserve requirements, qualitative controls, and credit rationing; and finally, the nature and significance of liquidity, shiftability, debt, and liquid assets. In place of purely hypothetical illustrations of bank balance sheets, Hart employs summary tables for all insured banks, and proceeds to a detailed examination of liabilities, assets, cash assets, and security holdings in the actual historical context. In place of a purely schematic illustration of multiple expansion (for which, interestingly enough, he finds a current value of about 3⅓), he puts the principle to work immediately from tables of deposit-creation during 1944-45 and during World War II. In place of a purely abstract discussion of credit control devices, he shows their operation in crucial instances. Part I manages to encompass not only all these fundamentals but also sophisticated presentations of the banker's portfolio problem, the classical "real bills" doctrine, the "sources and uses" analysis of reserve funds, the character of New Deal credit agencies, and many other matters enriching the actual context of the central themes.

Part II, devoted to monetary theory, also represents an outstandingly successful marshalling of institutional economics, pure theory, and statistical tests. The reviewer finds several features of the analysis to which he objects, but some are minor and none is catastrophic. For one thing the "Four Ways to Look at Money" do not seem to run on all fours: commodity-theory, transactions-velocity, payments, and cash balances. The "payments" chapter begins with graphic and verbal explanations of the flow of income (by sources and disposition), and continues with a presentation and critique of Keynesian theory. What is the distinctiveness of the approach which this chapter would represent? If it is Keynes' *really* distinctive monetary approach, one would expect emphasis upon the multiplier; but this, Hart (in my judgment, correctly) dismisses summarily as "an analytical fifth wheel" (p. 190). If it is the whole Keynesian equilibrium system, it should have been called by

that name. But in that event, a two-fold division into Keynesian and traditional theory would have been more natural than the four categories. Aside from the multiplier and on the score of strictly *monetary* analysis, Keynes' liquidity analysis belongs to the cash-balance approach, which he partly befogged, partly improved, but in any event greatly vitalized. Or if Hart's main point in the chapter is that decreased outlays, particularly on investment, reduce the flow of income and hence prices and employment, this could easily be done by reference to any suitable equation of exchange, which is scarcely a theory of money coordinate with the transactions-velocity and cash-balance approaches.

An introductory chapter (IV) to the four theoretical approaches to monetary problems considers "the" quantity theory (not one of the four), interpreted as asserting a simple direct correlation of price level with stock of money. Hart discovers a rough proportionality, if one allows for trend, for "larger swings" in the two series; but he finds the theory inadequate for smaller changes in prices, too much preoccupied with general price-level changes, and too little concerned with variations of employment. He points to the significance of relative price changes, including the damage wrought in a society subject to economic fluctuations by fixed dollar claims and by rigid (monopoly) prices.

As for the four approaches, the commodity theory quite properly receives short shrift. The second, the transactions-velocity theory, based upon the Fisher equation of exchange, seems to signify to Hart "the" quantity theory in some pre-eminent sense, and to involve a belief in the long-run stability of velocity. Other writers, such as Marget, Angell, and Robertson have not wearied of emphasizing the fact that, in general, $V = 1/k$, and hence the cash-balance approach is also *a* quantity theory. Neither approach *requires* a postulate of stability in V or k; and certainly Angell and Robertson have done much to emphasize short-run variations, and Angell has shown breaks in the long-run trends. Hart's interesting statistical analysis, showing "a good deal of stability" of velocity—interrupted in war periods—runs close to Angell's findings. What these statistical studies reveal is precisely the behavior of velocity, and not the validity or fallibility of "the" quantity theory or limitations of the transactions-velocity approach. Incidentally, Hart does not warn the reader that gross national product is a very incomplete index of total transactions in the Fisher sense: actually it is much closer to "income" in the sense of the conventional Cambridge cash-balance analysis.

The "payments approach" chapter pictures the circular flow of income receipts disposition and presents a lucid summary of Keynesian doctrine in terms of consumption function, marginal efficiency of capital, and liquidity preference. Hart criticizes Keynes for limiting the economic effects of money to its effect through interest rates, and for too great preoccupation with equilibrium and aggregative analysis. It is clearly implicit in the rest of the book that Hart is sceptical of any necessary or inevitable economic *impasse* arising out of the mere process of saving and investment in a capitalistic economy. If so, this should have been stated explicitly in the present chapter; and the

student should have been warned that the purely mechanical income-flow diagrams, which immediately precede the discussion of Keynes, do not mean, granting that "income can be OY_t *only if* investment equals C_tD_t," that Keynes shows it *will* not be.

In the theoretical portion of the book, Hart is at his best in the three following chapters, particularly in the analysis of the cash-balance approach. This type of theory is superior to the velocity approach, as the body of the chapter demonstrates, in dealing with (1) uncertainty, (2) transitional periods, and (3) the relation of "money" and "near money" (in Hart's terminology). The chapter, together with Appendix A, offers the best exposition yet available of the motives for holding cash, of the linkage of business risks, of the "margin-of-safety" motive relatively to inventories and insurance, of the credit-rationing and cash-balances, of the speculative motive, and of the bearing of near moneys on cash-balance holdings. The theory is tested empirically by reference to the real value of cash balances relatively to a prosperity-level function of potential output; deviations of the former from the trend of the latter tally with theoretical expectations and account for the chief price and employment variations. Incidentally, the text lacks an explanation, which my experience has seemed to show to be quite necessary, as to *how* people on the average can vary their real cash balances without any necessary change in the average dollar cash balances. Furthermore, it is difficult to see why utility or indifference analysis should not have been used, since most of Hart's theorizing runs implicitly in terms of weighing margins, and since it also fits gracefully with Keynesian liquidity analysis. In fact, unless marginal analysis is utilized, why is velocity (rate of spending) any less a "part of anybody's thinking about his private affairs" (p. 167), than is his attitude toward his cash balance?

The monetary theory section concludes with a clear general-reader's explanation of *ex ante* and *ex post* savings and investment, embellished in algebraic terms in an appendix, and a very strong chapter (under the curiously unilluminating heading of "Inflation and Deflation") on the non-monetary determinants of price movements: industrial price-policy, labor-union action, and the influence of government through specific taxes, utility rates, agricultural subsidies, wage policy, etc. Amongst the most eloquent passages of the book are the paragraphs on pages 252-53 which describe—anonymously—the plight of England under suppressed inflation.

Part III, entitled "Fluctuations, Employment, and Prices," consists chiefly in two long chapters: "Key Facts on Fluctuations," and "Interwar Annals." The former examines analytically and statistically the most important components of total output: industrial and farm production, construction, mining, durable and non-durable manufactures, and the chief monetary series. The author blocks out the major swings, studies crucial turning points and, in general, puts to use the theory evolved in preceding parts. The annals chapter goes over the same territory in a "play-by-play" fashion, showing the combination of forces during given quarters, years, or episodes. Naturally, these chapters do not lend themselves easily to review; and, furthermore, the

author conveniently summarizes his general findings. The analysis does not pretend to be a general theory of economic fluctuations, but rather—and quite appropriately—to concentrate upon the role of money.

I shall also not dwell upon Part IV, devoted to "International Monetary Relations." This part is not marked by the originality and exhaustiveness of other sections. In addition, it generally fails to provide the student reader with the factual and theoretical basis for understanding problems which are no less intricate than those involved in the domestic economy. Thus a brief discussion of the "spread of disturbances" puts in its appearance at the very beginning of the Part, long before the international payments mechanism is described. A chapter on the Foreign Exchange Mechanism introduces arbitraging before the reader has any conception of the prices lying at the bottom of these operations. And the (quite possibly beginning) student in this field finds himself whisked along into official stabilization of exchange rates and exchange control without any analysis of the ordinary equilibrating mechanisms operative upon the balance on current account. It cannot be denied that Hart brings up for discussion the most important current problems of policy; but the inexpert reader will scarely be able to appreciate their profound character.

But the concluding Part on "Stabilization Policy" re-establishes the high level of accomplishment of the volume as a whole. Introducing the theme, Hart judiciously takes the goals of full employment and price-level stability as coordinate. Certain non-monetary stabilization devices, such as the prevention of "log-rolling" inflation through political-pressure groups, are important; but schemes for the direct control of private investment and general price control are not promising. Thus the brunt of responsibility is thrown on monetary-fiscal policy.

Under this head, Hart first reviews a number of monetary panaceas for whatever practical salvage they may yield. Thus 100 per cent reserve money suggests the desirability of reducing the contribution to instability made by our commercial banking system, by means of increasing reserves requirements, if not to 100 per cent, at least to substantially more than their present level. I find it difficult to stomach the classification of the Federal Reserve Board's bond-reserve proposal as a "panacea," and the Townsend Plan as a "fiscal formula" (in the next chapter devoted to plans "which purport to be formulas for general stabilization"). Hart's generally favorable attitude toward the Graham Commodity Stabilization plan fails to touch upon the balance-of-payments difficulties and deflation which its international adoption could impose on one-crop countries.

But the analysis of various fiscal formulas reveals Hart's long aquaintance with these problems—the pros and cons of balancing the budget annually, or over the cycle, or for a certain high level of employment, and finally leaving the matter to discretionary authority. He sets forth the political reasons for the failure of employment guarantee to be enacted into law, and his own very compelling reasons for believing that the enactment would have been unwise.

To see what terrain must finally be covered by monetary-fiscal policy, the author first considers the automatic stabilizing influences of personal and

corporate taxes, social security contributions, and unemployment compensation, arriving at the interesting estimate that in the aggregate they would afford a $3 to $4 billion "offset to saving" for a $10 billion decline in national income. There are ways to increase the efficacy of these stabilizers, offered by Hart; but, because of the passive character of these influences, they are at best ancillary.

In the end we must rely upon "Discretionary Stabilization Policy and Forecasting." Discretionary private action cannot and should not be relied upon extensively. Discretionary public policy embraces stabilization through government wage policy, which signifies a gradually rising *average* wage level in accord with *general* productivity increases, and the rejection of the appeal to particular profit rates and the "in-lining" principle. Hart then proceeds to the backbone of compensatory public finance in public works and transfer payments on the side of expenditures, and flexible taxes on the side of revenue. While he would rely somewhat on the first two, his analysis shows that they can be overestimated as effective stabilizers. Flexible taxes thus come out as the main weapon, though Hart carefully points out that they entail certain serious drawbacks. In short, he offers no easy formula, but rather a broad combination of fiscal and monetary measures, including "debt management" and the rehabilitation of the conventional powers of the Federal Reserve System, and including also the creation of a political system which will resist "log-rolling" inflation.

The book is written in an informal and spirited style, and this is not incompatible with scientific profundity. The present reader could wish, however, that the fair face of Hart's creation were not so extensively pockmarked with hackneyed Washingtonese and shady colloquialisms. One fears that ungrammatical horrors are about to appear. Actually the sentences come out intact, but the suspense is wearing. However, the defects of style are only beauty blemishes. The bare outline of the course of Hart's analysis reveals that we have in hand an opus which is bound to be recognized in the history of monetary theory and policy as a substantial contribution.

Howard S. Ellis

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The Economics of Money and Banking. By Lester V. Chandler. (New York: Harper and Brothers. 1948. Pp. xiv, 732. $4.50.)

This book was written as an introductory textbook in Money and Banking. The author states in his Preface that he has not attempted to write to his professional colleagues but rather has tried to keep in mind the needs of the students. I believe that Dr. Chandler has succeeded in writing a remarkably clear and teachable text from the standpoint of both the organization of the material and of his presentation of the complex problems and theoretical concepts with which a modern money and banking text should deal. In certain instances this clarity and understandability has been achieved at the expense of over-simplification. It is impossible, particularly in discussing theory, to deal with every conceivable reservation or weakness, without hopelessly confusing the student in a maze of argument and counter-

argument. In general, the author has avoided the presentation of polemics by pointing out the positive contributions of various possible theoretical approaches to problems. There are, however, a number of points on which professional economists will disagree. No one would be capable of presenting current monetary policy and theory in a manner which would please all of his professional colleagues no matter how fair and objective he tried to be. But before touching upon a few of the points which the reviewer, at least, considers to be debatable, I will turn to a brief survey of the content of this book.

In spite of its length the author has not intended to provide an exhaustive treatise on money and banking. In the selection of his materials and the relative weight given to the various aspects of the field he has sought to give the beginning student an understanding of the relationship between the money and banking system and the other parts of the economy. The author has employed a functional approach to monetary and banking concepts and institutions which in comparison with most older texts (and a few newer ones) is quite refreshing. He tends to avoid sterile definitions in favor of an orderly outlining of functions. For example, no definition of money is attempted. The one fundamental purpose of money in the economic system is "to facilitate the exchange of goods and services—to lessen the time and effort required to carry on trade." This function is performed by the monetary and banking system. Chandler includes in the money supply not simply legal tender notes and coins, but also bank deposits subject to check.

Following his discussion of the functions and kinds of money, Chandler devotes four chapters to monetary standards and their history, largely U.S. monetary history. The bulk of the material deals with various types of gold standards which he classifies on three bases: (1) the way in which circulating moneys are redeemable into gold; (2) the degree of monetary management employed and (3) the extent of the geographical coverage, *i.e.,* national and international gold standards. The inclusion of this second basis for classification is extremely important. Too much space is devoted in most texts to the form of gold convertibility and not enough to the relationship between gold policy and the monetary system as a whole. The former is likely to be of little more than historical interest in the future since any country which is on the gold standard will undoubtedly adopt some variant of what Chandler calls the "qualified gold-bullion standard" in which the monetary use of gold is limited to the settlement of international balances.

In the chapter on commercial banking, considerable space is devoted to a systematic discussion of the factors determining the volume of deposits that can be created by the banking system. The techniques of commercial bank operations, management and supervision are dealt with only briefly as are consumer credit, savings and investment institutions, and the money market. One chapter (out of a total of 34) is devoted to U.S. banking history before 1914 and one chapter to the structure and organization of the Federal Reserve System. Three chapters are devoted to the mechanism and objectives of Federal Reserve and Treasury credit control. These chapters are excellent from the standpoint of the systematic organization of the material and the

summary outlines to help the student organize what he has learned. Included in the chapter on Federal Reserve policy is a brief discussion of wartime objectives.

Four chapters are devoted to international finance covering the international payments mechanism, exchange rates, government intervention in exchange markets and a chapter on the Bretton Woods institutions. Although the reviewer realizes that the author could not discuss fully the complex factors which relate to the determination of exchange rates, it would seem that an unqualified identification of purchasing power parity with the equilibrium rate represents an unnecessary and misleading over-simplification. The causes of deviations of exchange rates from purchasing power parity are, according to Chandler, (1) government intervention and (2) international capital movements. No mention is made of the fact that changes in "real" factors such as shifts in demand for exports, the exhaustion of resources or the loss of important sources of invisible income may result in an equilibrium rate far different from that derived from comparing ratios of prices in different periods. In view of the considerable literature on the limitations of the purchasing power parity approach to the determination of exchange rates, the author might well have included some of the major criticisms in his discussion.

One gets the impression from Chandler that nations can always balance their international accounts by permitting exchange rates to find their own level in the market. This overlooks the fact that market rates need not necessarily reflect equilibrium rates, and more important, that there are many cases where no rate, within bounds of feasibility, would achieve equilibrium. Dr. Chandler's treatment of exchange rate theory is reflected in his unsympathetic attitude toward exchange controls, except possibly those which curb erratic capital movements. In a world of trade and exchange controls largely forced upon countries by the terrific maladjustments created by the war—maladjustments which it may require a generation or more to resolve even in the most favorable political environment—it is time that economists stopped treating foreign trade controls as simply the product of misguided governmental authorities.

The last 200 pages of his book are devoted to monetary theory and policy. Four principal types of monetary theory are discussed: (1) quantity theories of the transactional type; (2) the cash balance type of quantity theory; (3) commodity theories; and (4) income and expenditure theories. The treatment is, for the most part, constructive rather than polemic in that the author seeks to present the positive contribution of each type to the analysis of economic phenomena. The principal exception is his critical treatment of the commodity theories, some variants of which he considers to be misleading while even the most valid formulations are shown to have only a limited usefulness. The discussion of the income and expenditure approach includes a clear and simplified explanation of the income, investment and savings process, the multiplier, and related concepts.

In his final chapter Chandler discusses a number of possible objectives of monetary policy including the stabilization of the price level, stabilizing the

total quantity of money, stabilizing MV, and the stabilization of monetary demand for current output. He concludes that the best criterion is the "increase in the money demand for output in proportion to the supply of productive factors: stabilization of the average money income per unit of productive factors." The adoption of this criterion would permit a decline in the price level of output only in response to increases in productive efficiency. The author states, however, that such a policy could not achieve full and stable employment if "obstacles of a non-monetary character" intervened, and he readily admits that "purely monetary measures cannot reasonably be expected to achieve their objectives if they must continually combat unfriendly economic policies."

I would like, however, to raise a question regarding the propriety of presenting the control of monetary demand in relation to output as primarily a function of monetary policy operating in a favorable non-monetary environment. Unless we are to include in "purely monetary measures" something more than the normal powers of Central Banks and Treasuries over commercial bank reserves and money market rates, *e.g.*, fiscal operations and taxes to discourage or encourage hoarding, it seems to me inappropriate to speak of monetary measures as the sole or even the dominant instrument for determining the level of monetary demand. Considering the limitations of monetary measures, would it not be just as appropriate to consider non-monetary measures as being able to achieve their objectives in a favorable monetary framework? Or perhaps better still should we not discuss the coordination of monetary and non-monetary measures for the achievement of certain economic objectives? This is admittedly a question of emphasis but it is important that students appreciate fully the limitations of monetary policy and the possible need for positive measures (as opposed to the removal of non-monetary obstacles) in fiscal, wage, investment and other non-monetary policy fields for the realization of our objective.

These critical remarks are in no way meant to depreciate the value of this book as a stimulating and teachable introductory text. In my judgment, Dr. Chandler has made an excellent contribution in this field.

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International Trade, Finance and Economic Policy

Die Neue Weltwirtschaft. By ADOLF WEBER (München: Richard Pflaum Verlag. 1947. Pp. xii, 423.)

Professor Weber has written a good introduction to the new world economy. He deserves the warmest commendation for presenting economic facts and principles from a world viewpoint, one too rarely employed by economists. To an extent, the latent or assumed nationalism which underlies most discussion of "foreign" trade is still present but it does not serve as a framework for his study. His otherwise objective account is marred by his defense of

Germany, understandable as that may be. For the most part, however, his treatment is balanced, keen and remarkably up-to-the-minute in facts, insights, and appreciation.

In spite of his excellent analysis, his recommendations are far from clear. He hopes for a reconstructed world operating under the freest possible conditions of trade. He recognizes the enlarged role of government but is vague about its limits. He clearly describes the problems of international payments but after stating the defects of the gold standard, he offers, as a substitute, only general advice. He states very well the relations of internal and international control of credit, investment, and foreign debt, but aside from an endorsement of the instruments of the United Nations, he has hardly any suggestions as to how one can change the present situation into the one he hopes for. Only the briefest mention is made of the state monopoly of foreign trade. It is difficult to know how much actual or implied censorship there is in a German book published under Military Government Information Control but the fact remains that Professor Weber offers no criticism of Allied policies and no one would know from his account that the Russians are playing their prominent role in the German, European, and world economies.

Professor Weber has ostensibly written an introductory text, yet his failure to give a fairly clear picture of the world economy as he expects or hopes it will be stabilized is a pathetic and tragic omission, particularly for a German economist. Without a reasonably clear model, it is practically impossible to form policies for the present and the future. Professor Weber ably presents the classic advantages of international trade, but he takes the course—perhaps, in the final analysis, the only one, at any rate, one especially dear to teachers—of making wisdom so clear that men will be constrained to act upon it. This method plays down the realities of prejudice, power, and politics but these are the very realities which must be analyzed and solved before such wisdom will become clear and acceptable.

His hopes rest somewhat uncertainly upon the International Monetary Fund and other instruments of world cooperation. He pleads for an appreciation of their relatedness. He urges regional free trade (*e.g.* Benelux) as stepping stones to a saner world economy. He argues for a union of the three western zones, for then Western Germany would serve as a "magnet" to draw in Eastern Germany and Southeastern Europe. Meanwhile, the Allies should avoid giving Soviet Russia any cause for suspicion. Brave, wise and vaguely hopeful, it is a plan many people share: it looks pitifully inadequate even on paper. Yet it is an achievement that, after the stress of the last fifteen years, and particularly under present circumstances, Professor Weber could write such an objective and enlightened introduction to world economics. Its virtues and defects help to appraise the quality of German economic thinking at this moment of fateful decision for themselves and for the world. With all its failings noted, this study by Professor Weber is reassuring.

Meno Lovenstein

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Industrial Organization; Price and Production Policies; Business Methods

Modern Business: An Introduction to Principles and Problems. By LLOYD V. DOUGLAS, ROBERT O. SKAR and RAY G. PRICE. (New York: McGraw-Hill. 1948. Pp. x, 417. $3.50.)

This is a highly readable and interest-engaging text for beginning business students. Its twenty-nine chapters span the entire business field with clarity and preciseness, and there are ample graphs, charts, and diagrams to point up the salient principles and facts. Each chapter is further accompanied by the customary questions for review and discussion and references, but in addition has the not-so-common "suggested projects" with which to illuminate the subject and its case problems.

The usual topics receive their fair share of attention: money and banking, insurance, methods of financing, location, labor problems, accounting, government regulations, etc. Attention is also called to such weaknesses in our economy as the authors feel merit the consideration of all good citizens and ethical business men. As a clear, comprehensive overview of business, Professors Douglas, Skar and Price have done an admirable job.

If this text has a fault, it lies mostly in the fact that the treatment is perhaps too elementary. The average college student who takes a course in business organization these days is usually a junior or senior, and in any event has probably been exposed to some of the principles of business, either in conversations at home, or in the actual business world, or on Army duty. Hence, it is reasonably safe to assume that the average student taking even a beginning course in business administration has already acquired at least a modest measure of financial knowledge and sophistication.

On the other hand, previous conceptions of a field like business organization can be and often are misconceptions, and perhaps it is wise to orient the student correctly by beginning "from scratch," and to assume that he starts "simon-pure." Such is the strategy of *Modern Business*. An additional merit of the work is that it deals with special areas and topics that are often ignored in other texts, such as the interplay of government and business.

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Agriculture; Forestry; Fisheries

Farm Management. By JOHN D. BLACK, MARION CLAWSON, CHARLES R. SAYRE, and WALTER W. WILCOX (New York: Macmillan. 1947. Pp. xii, 1073. $5.50.)

Already in use in the classrooms of several colleges and universities, *Farm Management* is probably the most comprehensive work of its kind available today. Written at the upperclass college level, the book is of value to teachers and workers in general economics for its thorough treatment of production economics as applied to the agricultural industry.

As one of the applied sciences, farm management involves the joining together of principles and facts from many sources. An understanding of basic economics, of several natural sciences, and of applied sciences such as agronomy and animal husbandry is needed to make intelligent management decisions. The influence of a management decision is first felt in a particular farm enterprise or "department" of the farm business. But the net result must be tested by the influence the practice or change in organization exerts on the farm business as a whole. Thus in a very real sense, as the authors point out in their preface (p. vi), the economics of farm management is the economics of the farm as a firm.

Students of farm management have sometimes divided management decisions into two groups: (1) farm organization or "what-to-do decisions" and (2) farm operation or "how-to-do-it decisions." If this over-simplified division of the subject matter is used, Dr. Black and his associates devote more than forty of their forty-eight chapters to the former.

Starting with their definition of the farm-management function, the first five chapters (Part One, the introduction) are largely devoted to institutional and traditional factors surrounding agricultural production in the United States and the world at large. The general nature of farms, the people who operate them, and of their business goals are realistically illustrated with well-chosen examples.

Broad geographic coverage is obtained (Part Two, Chapters VII-XV) by showing the application of basic principles in selected cases. Here financial and farm organization data are presented for six broad types of farms, ranging from specialized one-crop units in Maine, Texas and the Pacific Northwest to more complicated feed-and-livestock farms in the Midwest and cotton-livestock farms in the Southeast. While treatment of individual areas and type situations is all-inclusive, the book does not carry information on each area or type of farm in sufficient detail to satisfy fully the needs of students in that particular area. Such is not the authors' intent. The cases and wealth of descriptive material are used as vehicles for developing and treating principles. Beyond that, the student must make the application to his own situation.

In Part Three, eight chapters are devoted to principles and methods of analysis. Excellent treatment of input-output relationships is given for potato production (p. 149), dairy cattle feeding (p. 201), hog feeding (p. 272), and feeding cattle (p. 280). Since so many farm organization decisions hinge upon what will happen to input-output ratios when inputs are changed individually or in groups, this assemblage of data is a distinct contribution to the science of farm management. Many agricultural economists feel that one key to increased production efficiency on farms is the further development and use of input-output tables of the type mentioned above. The economic principles or models are well developed. Too frequently, however, the principles have been inadequately applied due in part to the absence of needed input-output data, or failure to assemble and use such data as are available in the area of production economics. Nevertheless, in this book the

principles are better developed than are the means for applying them. Some will argue that more specific tests and criteria of farming success exist than those outlined in this book.

General economists will probably be most interested in the authors' treatment of the principle of comparative advantage (Chapters XVI, XVII, XVIII). Curves from actual farm data showing fixed, variable, average, and marginal costs should be a real aid in getting these concepts across to students. The discussion of productivity differences, page 407, may be applied more broadly than to land, animals, or tools. In the final analysis, it extends to man himself. Productivity is well defined in its two dimensions, "efficiency (output per unit of input) and capacity."

It is in the early chapters of Part Four on problems of management that some attention is given to farm operation. Even here, the prospective farmer will find few specific suggestions on how to do his work. Rather, the authors stick to their objective of teaching principles. To the problem of equipment selection, for example, a complete "type" analysis of the economics of machine use is presented. If the farmer could obtain all the data on machine inputs and outputs which the authors use, he presumably could work out the best answer for his own conditions. It is doubtful, however, that many practical farmers would have at hand the necessary data. In other words, *Farm Management* is more a treatise on production economics for the academic group than a book for the practical farm operator.

In addition to describing the economy of labor use on farms, brief attention is given to work simplification in agriculture in chapters pertaining to labor management. To the rising interest in work simplification, the authors sound this warning, "Usually work simplification calls for more supervision than familiar work procedures. This may mean a substitution of management for labor . . . added costs of supervision . . . taking away from the worker some of his [prized] responsibilities" (p. 558). Such a statement could presumably be made of almost all technological progress.

Part Five deals with management by types of farming and is essentially a continuation of Part Two on systems of farming. This brings to twenty-one the number of chapters devoted to description and discussion of types and systems of farming. Such a bulk of material makes it necessary to read extensively to absorb the underlying principles which are demonstrated.

The interdependence of agriculture and other production, foreign markets, national agricultural programs, and related public problems are treated in summary fashion in the last chapter, Agriculture in the National Economy. Thus again, as is the case throughout the book, the economic problems of society at large are intermingled with the business management problems of the individual farmer.

Summing up the forty-eight chapters, this reviewer concludes that there is much more in the 1073 pages than the title implies. The book treats a broad range of subjects from the natural sciences to public policy. Written in an understandable manner, it is an economist's, not a farmer's, analysis of farm production.

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Cotton: Hearings before the Subcommittee of the Committee on Agriculture, House of Representatives, 78th Congress, Second Session, December 4-9, 1944 (Washington: Supt. Docs. 1945. Pp. 850. $1.25.)

Study of Agricultural and Economic Problems of the Cotton Belt: Hearings before the Special Subcommittee on Cotton of the Committee on Agriculture, House of Representatives, 80th Congress, First Session, July 7-8, and October 10, 1947. 2 Vols. (Washington. Supt. Docs. 1947. Pp. 1170; $2.; 55c.)

The Special Subcommittee on Cotton of the House Committee on Agriculture created early in 1944 deserves some type of citation for distinguished service to the national economy. It has provided a demonstration in formulation of public policy with the aid of scholarly research which is worthy of professional attention from the political scientist and of emulation in other and future Congressional inquiries into matters of major national concern. The Subcommittee has become known as the "Pace Committee," after the name of its first chairman, Representative Stephen Pace, of Georgia. In the 80th Congress, it has been sympathetically headed by Republican Representative Anton J. Johnson of Illinois.

More immediately, the Subcommittee has produced three volumes of policy statements and economic studies concerning cotton and the problems of the South which will remain landmarks in the economic literature of that field for some time. That they are not more widely known is perhaps natural. Congressional documents are seldom literary or scientific landmarks, and do not benefit from the paraphernalia of promotion which attends the launching of a best-seller or a new or "revised" textbook.

This is not to say that the "Pace Committee" has achieved its objective. Its uncompleted task has been to formulate and sponsor a postwar policy and program for cotton in face of chronic surpluses, growing world production, competition of synthetic fibers and substitutes, and the high-cost-high-price operations characteristic of domestic production. It may well be that a more hurried undertaking could hardly develop the factual foundation and allow for the complicated adjustment and accommodation of conflicting interests which a truly effective, new national cotton policy and program will require. In any case, there is now at hand a thoroughly adequate, if not wholly complete, factual and analytical picture of "the cotton situation." It is carried principally within the dull formats of the *Study of Agricultural and Economic Problems of the Cotton Belt*, published as Hearings of the Special Subcommittee on Cotton, July 7-8 and October 10, 1947. Available, too, and at least equally important, is a full-dress presentation and open discussion of policy and program recommendations from each of the several major, and frequently conflicting, interests within the cotton bloc—the Subcommittee Hearings on *Cotton*, December 4-9, 1944. Here, then, is raw material for a new approach to the cotton problem; the task of economic and political craftsmanship and statesmanship remains.

Any one of a large number of the studies and the policy and program statements published in the 2,020 pages of the three volumes of Hearings,

above, would make an appropriate subject for review. The statements run to some seventy-five in number—from as many agencies, organizations, business firms, and individuals; there are some twenty studies, many extremely specialized and detailed. Within limitations of available space, it will be possible here to sketch something of their nature and scope and to identify findings and judgments for more leisurely probing.

The year 1944 witnessed perhaps the peak of what was assumed to be advance planning and thinking directed toward postwar adjustment. Most national and many state, local, and private agencies and organizations, without a preclusive interest in pure war activities, went to work on postwar planning. The Office of War Mobilization was then given statutory recognition, but the words "and Reconversion" were added to its title. It was in the same year and the same context that the Special Subcommittee on Cotton came into being. After what must have been very impressive staff work for the Subcommittee by agencies and organizations within the cotton industry, the Subcommittee opened hearings on December 4, 1944, having assembled for that purpose the officials and technicians of a host of governmental agencies, farm organizations, ginners, warehousemen, crushers, shippers and merchants, manufacturers, labor unions, cotton exchanges, banks, railroads, colleges and universities, agricultural journals, private research groups. These filed their detailed and extended policy and program recommendations and entered into open and often sharp debate upon them. All is recorded verbatim in the published Hearings on *Cotton*.

As the group convened it listened, first, to a purely factual and statistical description of the cotton situation prepared by the Bureau of Agricultural Economics. The Bureau reported that about one-fourth of the nation's farm population was engaged in cotton production on some 1,600,000 farms, and that upwards of half a million workers were employed in cotton textile manufacture alone. Cotton acreage had dropped from 44,448,000 acres in 1929 to 20,472,000 acres in 1944. But, for a variety of reasons, the average yield per acre rose dramatically and 1944 cotton production was estimated at 12,320,000 bales, compared with an average of 14,414,000 for the period 1923-1932. With an annual cotton carry-over of 3-5,000,000 bales regarded as normal, the carry-over had been running above 10,000,000 bales in the seven years since 1938. For more than a decade, large stocks of cotton had been owned by or carried under loan from the government. In 1939, the figure stood at 11,049,000 bales; despite war demands it stood at 5,847,000 bales in August, 1944.

Domestic mills used roughly 7,770,000 bales in the 1936-37 season, 10,970,000 bales (an all-time record) in the 1941-42 season, and 9,830,000 bales in 1943-44. In 1927-28, foreign mills used 9,040,000 bales of American cotton. But exports were drastically lower through the following decade, except for 6,163,000 bales shipped under the special subsidy in prewar 1939-1940. Total foreign shipments, including lend-lease, in 1942-1943 stood at 1,480,000 bales.

From 1925 through 1940, farmers received less than the parity level from cotton prices. In two and a half decades they swung from as high as 35 cents

per pound to as low as 5 cents, and were averaging just over 20 cents during the 1944 marketing season. Prices of foreign cotton for export were then under domestic prices, and the government had announced a four cent per pound export price differential shortly before the Hearings commenced. The government loan rate under the AAA program in 1944 was 21.08 cents per pound, based on 95 per cent of parity. Available statistics showed that in 1943 cotton farmers were receiving 12.7 cents out of each dollar spent for cotton goods at retail, the charge for processing cotton into unfinished cloth being about the same. Apparel and household goods figures for 1939 showed that farmers received about 7.5 cents of the dollar spent at retail; wages and salaries accounted to upwards of 50 per cent of the remainder. All but three-eighths of cotton goods were going into those uses; the remainder into industrial uses.

Competitive products were increasing in amount. Production of commercial foreign cotton rose from 6,888,000 bales in 1921 to the record high of 18,354,000 bales in 1936. Foreign consumption as well as production declined as war spread in the late 1930's, so that stocks of world cotton were estimated at a record level of 14,381,000 bales in 1944. Rayon production in the United States increased by two-thirds from 1939 to 1942, and in that year was the equivalent of 1,500,000 bales of cotton; world production increased by more than one-half and was the equivalent of some 8,000,000 bales. This latter increase was in Axis areas cut off from cotton and wool imports. The U.S. increase had been importantly speeded by the steady secular price decline in rayon yarns—$2.79 per pound in 1921-22 to from 49 to 55 cents per pound in the years following 1938. Thus, staple rayon fiber, used on cotton or wool spinning and weaving machinery, accounted for about 20 per cent of the total domestic rayon production in 1944; it accounted for only 2 per cent in 1935. Again, in 1939 paper was being substituted in various products in an amount equivalent to 1,000,000 bales of cotton. Farm income: gross farm income, including government payments, in the ten cotton states of the South averaged $193 per capita in 1939; it averaged $425 in the other states; in 1943 it stood at $415 in the South, but at $1,092 in the other states.

Such dire statistics point up the national stake in a solution of the cotton problem. They suggest, also, that it is not to be solved wholly within agriculture itself. Not only is cotton an export commodity, it is also threatened gravely by competing fibers inside its domestic market. If production costs were fairly even from farm to farm, all would still not be well. Actually, however, production was and is dispersed over the Southern landscape. Thousands of small marginal and submarginal producers would perhaps never be able to continue except for artificially maintained prices. In the Delta and the Texas Plains large producers were beginning to make efficiency advances giving some assurance of power to survive without subsidy or support prices.

Of the large number of "solutions" offered at the Hearings, that advanced by Secretary Wickard for the Department of Agriculture will serve here to indicate the issues and approaches.

It warned, first, that the cotton export subsidy program and the price support were temporary measures, and that, even so, they have the suicidal

effect of pricing cotton out of its already shrunken market. It listed three basic *requirements* for any successful solution; (a) full industrial production and employment to sustain consumer markets; (b) special efforts to create effective consumer demand from low-income families even under full employment; (c) expanded world trade to underpin both farm and non-farm activity. There follow three major *objectives* of a successful solution: (a) greater efficiency per man and per man-hour on the farm; (b) protection of farm income, related not merely to cotton production but to alternative land-uses; (c) soil conservation.

Complete cotton mechanization, in areas most suitable for mechanization, the Secretary continued, had demonstrated a reduction of from 150 man hours of labor per acre to some 30 hours, threatening displacement of as much as 80 per cent of cotton farm labor. But this would reduce production costs similarly, just as use of fertilizers had increased lint yields by 50 per cent. Perhaps cotton could, indeed, survive under free-market conditions.

The Department's statement advanced certain general elements of a solution. It placed Southern industrialization among the chief answers—economic opportunities for displaced farm population, markets for diversified farm production. Others were: Research to lower production costs and develop new uses for cotton, crop insurance, greater efficiency in distribution.

But, it asked, "How much cotton should Southern farmers grow, and what kind of price should they expect for it?" It suggested the impossibility of two extremes: Peg the price legally for all the cotton the South can produce and suffer the consequences in loss of domestic and foreign markets: Abandon all government programs immediately and let the domestic price fall to disastrous levels, with ensuing mass poverty in Southern agriculture.

Four possible approaches were considered: The first would hold cotton prices at some given level such as parity price, retaining other government programs. This would probably encourage foreign production and permit synthetic fibers to make further inroads on the domestic market; only drastic acreage allotments could forestall mounting surpluses; the necessary and costly export subsidies would invite foreign reprisals. The second approach would provide a parity price for cotton domestically consumed and a world price for the exported production, with no acreage restrictions. Normally it would not be costly, but it, too, would involve further loss of the domestic market to synthetics; acreage allotments or marketing quotas would be needed if the foreign market failed to absorb the surplus. Both of these approaches would give the farmer his whole return through the market place, a situation he prefers. A third approach would provide a domestic cotton price "hitched to a world price." It would be less than an assured parity price for the whole crop, but payments would be made to bolster producers' incomes. No export subsidies would be required. Cotton could effectively meet foreign and domestic competition. Consumers would benefit.

All three of the above approaches, the Department stressed, two calling for very heavy appropriations, would perpetuate the situation from which they stem through year-to-year appropriations. All would protect producers' incomes, but none would get cotton onto its own feet.

A fourth approach was endorsed in the Department's submission—"a reconversion program for the Cotton South." Like the third approach, it would provide one price for both domestic and foreign markets and make supplementary income payments to farmers—not perpetually but at a descending rate over a period of five or more years for use in cotton mechanization and other efficiency measures, and for shifts to other crops; special aid would be given farmers in areas not suited to mechanization. It would maximize the effectiveness of other necessary governmental and private programs in the field of farm credit, soil conservation, industrialization, education. It would be very costly in its initial years, but its promise would be elimination of subsidies and price supports and an economically efficient agriculture for the South.

". . . I have never heard a sounder paper, or one that has attracted me more strongly, than that which was read a few moments ago by the Secretary of Agriculture." Such was the comment of Oscar Johnson, president of the National Cotton Council, joint organization of the major interests within the cotton industry, who followed Secretary Wickard to the stand. It was his personal view—the Council had yet to formulate its specific recommendations.

The "reconversion" program, or any other following its basic principles, would require vigorous support from the whole cotton industry. The balance of the December 1944 Hearings showed that that would not be easily forthcoming. Export subsidies and the price support were then and still remain the dike against disaster. Under them, cotton seems a sure "cash crop" from one year to the next for hundreds of thousands of farmers to whom cash is piteously scarce. And a bird in the hand is worth two in the bush. That view is reflected in the policies and programs recommended by agencies and organizations closest to the mass of cotton farmers, *e.g.*, the statement of Tom Linder of Georgia for the Southern Commissioners of Agriculture, that of Ransom Aldrich of the Mississippi Farm Bureau for the American Farm Bureau Federation, and many other individuals and organizations. Their recommendations emphasize research for greater efficiency in production, processing and distribution, and involve frequently ingenious governmental programs related to price supports, export subsidies, foreign trade policy, and the handling of surpluses.

Programs suggested by cotton interests more remote from the basic producer tend to follow the free-market-competitive-price principles of the "reconversion program," *e.g.*, the statements of A. L. M. Wiggins, South Carolina, then President of the American Bankers Association, M. W. Espy of the Alabama Bankers Association, R. O. Beach for the American Cotton Shippers Association, Lamar Fleming, Jr., of Anderson, Clayton & Company, E. R. Oliver of the Southern Railway System for his own, the Central of Georgia and the Seaboard Airline railways, Solomon Barkin of the CIO Textile Workers, George Googe of the A. F. of L., William D. Anderson of the Bibb Manufacturing Company.

If the Subcommittee had done no more than provide this extended record of the views of all of the diverse interests in the cotton industry, its time would have been well spent. The record is a reconnaissance report of in-

estimable value for tactician, strategist, and staff in the field of cotton. But the Subcommittee made a further contribution.

For all the wealth of statistical and factual material developed in the 1944 Hearings, the Subcommittee felt the need for more precision and detail and for objective analysis and interpretation of the many highly specialized problems within the central problem. It asked the National Cotton Council to initiate and manage a basic fact-finding investigation for that purpose. Accordingly, from early 1945 to the middle of 1947 economists and technicians from some forty-odd colleges and universities, state and federal agencies, and private organizations worked together in a coordinated fact-finding investigation. The studies were filed as the *Study of Agricultural and Economic Problems of the Cotton Belt,* published as Subcommittee Hearings for October 10, 1947. The sub-studies were produced by working committees under a central steering committee chaired initially by the late Dr. Clarence Dorman, director of the Mississippi Experiment Station, and later by Dr. Frank J. Welch, dean of the School of Agriculture, Mississippi State College. The subjects follow: (1) Adjustments Toward Efficient Agriculture in the South; (2) Preparation for Market and Marketing of Cotton and Cottonseed; (3) Cotton Goods Production and Distribution Techniques, Cost, and Margins; (4) The Competitive Position of Cotton and Other Materials; (5) Production Studies of Synthetic Fibers and Paper; (6) Foreign Market Outlets for American Cotton and Cotton Manufacturers; (7) Industrialization and the South; (8) Southern Education Problems; (9) The Health Situation in the South and Recommendations for the Future.

The relevance of each of the sub-studies to the policy and program issues raised in the December Hearings of 1944 will be obvious. That which deals most directly and broadly with those issues is that on farm adjustments for an efficient Southern agriculture. It was prepared by a committee headed by Dr. Welch. It did not purport to "prove" and support either of the basic alternatives for cotton—the free market or a control program. It proceeded meticulously to measure the consequences of each, and, under a set of assumptions as to national income, employment, price levels, absence of production restrictions, competitive farm pricing, to project a pattern of "efficient" agriculture for sixteen Southern "type of farming" areas. With reference to consequences of a control program, it found that American cotton would probably be largely eliminated from foreign markets. Under the efficiency pattern and competitive prices which it projected, the foreign cotton market would remain important, cotton production would go to those domestic areas to which it is best adapted, high-cost areas would be more largely devoted to diversified farming. It would require the non-farm job opportunities and fiber and foodstuff markets which industrialization can provide, larger farm units, adequate farm credit, greater mechanization, better farm management practices.

The foregoing comments deal most superficially with the "Adjustments" study. It is perhaps one of the most significant American documents in applied agricultural economics and agricultural planning. Most of the other studies, though narrower in scope, reflect a similar competence. This is

particularly true of the study of cotton's competitive position prepared by a group headed by Dr. M. K. Horne of the University of Mississippi and of the study on synthetic fiber and paper production headed by Dr. Horne and Robert B. Evans of the Department of Agriculture. An interesting incidental aspect of the very workmanlike Industrialization study took the form of a dissent by chairman John V. Van Sickle from the views of his committee regarding minimum wages and industry-wide collective bargaining.

Space permits only the briefest mention of the contents of the third volume in the series here reviewed. It is Part 2 of the *Study of Agricultural and Economic Problems of the Cotton Belt,* published as Hearings of the Subcommittee, October 10, 1947. (The July Hearings, treated above, constituted Part 1, but are not so labeled.) This volume carries a set of studies requested by the Subcommittee and conducted within the Department of Agriculture dealing importantly with research and with technological improvements in cotton production and utilization. They supplement the above fact-finding inquiry conducted for the Subcommittee by the National Cotton Council. The study subjects are as follows: (1) Relationship of Research to the Cotton Problem; (2) Better Cottons; (3) Fundamental and Applied Researches Reveal New Horizons for Cotton and Cottonseed; (4) Synthetic Fibers and Papers as Competitors of Cotton; (5) Mechanization of Cotton; (6) Recent Developments in the Control of Cotton Insects; (7) Soil Conservation and Land-Use in the South; (8) Extension and Educational Work to Improve Conditions in the Cotton Belt.

The Census volumes of the next three years will paint a more hopeful picture of the South than has been extant. Those who have observed it closely in recent years are aware that fresh statistics will show a marked decline in rural-farm population, substantial urban growth, considerable out-migration, relatively dramatic gains in non-farm employment and income, similar advances in agricultural diversification. All of these trends were under way in the 30's; they were accelerated by war, and have since continued strong. (Symbolically, in 1946 four of the five states leading the nation in industrial construction contracts valued at $1,000,000 and over were in the South.) Such trends go to the roots of any solution of "the cotton problem," and they do not involve conflicts and controversies in the field of agricultural policy. However sharply conflicting the policy views within the cotton industry, there is nearly unanimous and even fervently active support for the Southern industrial growth upon which they rest.

In the absence of a national cotton policy and program more adequately attuned to a rational solution of the problem, stability depends upon continued high-level national production and employment, upon the Southern industrial growth it largely but not wholly makes possible, and upon public willingness to continue export subsidies and price supports for cotton. It would be interesting to know whether in a perhaps hypothetical continuance of this set of conditions, Southern industrial growth might of itself solve the problem of cotton. Farm adjustments which have come in specific small areas of the South through industrial growth render the question at least plausible.

Impatience at delay of a new national policy and program for cotton is

understandable. So, too, is the delay. In its "Adjustments" report the committee under Dean Welch wrote: "Agricultural policy must, however, take account of the economic and political environment in which it finds itself. Research on policy and programs must thus be realistic and not be developed within a framework of assumptions that disregard institutional and legal forces that are the very essence of agricultural difficulties." But it also observed that the solution of agricultural adjustment problems in the South ". . . is a national as well as a regional problem. A modern nation cannot avoid balancing its total production-consumption budget. This can be done at a low level with a great deal of unemployment, inefficiency, and suffering; or it can be done at a high level with full employment, high efficiency, and a better life for all."

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Labor and Industrial Relations

Unions, Management and the Public. By E. WIGHT BAKKE and CLARK KERR. (New York: Harcourt Brace. 1948. Pp. xx, 946.)

Teachers of trade union organization, collective bargaining and labor economics will welcome this volume of selected readings as a partial answer to the problem of finding adequate supplies of reading materials for their classes. The limitations of single texts in the labor relations field have been apparent for a long time. Some provide the student with a monistic interpretation, neo-classical or Keynesian. Others are sheerly factual. And most were written before World War II.

The present collection has none of these defects. Here the student will find the theories of Slichter, Pigou, Lester, Dunlop, Hicks, and Dobb among others, as well as the partisan arguments of the spokesmen for both labor and management. Factual description is supplemented by theoretical analysis throughout the volume. And a considerable portion of the book covers recent developments and issues.

The central theme, unlike the conventional "problems" approach, reflects this contemporary orientation by stressing the impact of union organization on workers, management, and the public. Some 295 selections from more than 150 authors are fitted into 27 chapters grouped under five main sections: Development of Unions; Response of Management; Collective Bargaining; Terms of the Agreement; and The Interest of the Community. For each section and chapter the editors have provided an introductory essay which analyzes the issues under discussion and integrates the various sections.

In a collection of such broad scope it is inevitable that there will be room for criticism of both the scheme of organization and the selections. One may question the inclusion of material on organizational strikes and boycotts in the section on collective bargaining rather than in that on union organization; or the placing of readings on contract arbitration before the discussion of grievance procedure. On the whole, however, the editors have "slotted" the materials into appropriate classifications. Moreover, as they point out in the

preface, the material can easily be assigned in a different sequence depending upon the purposes of the course. This task of rearrangement would have been facilitated had the editors provided a topical index, rather than simply a list of authors and titles.

When it comes to the selections themselves, there is obviously more opportunity for differences of opinion. But, as the editors point out, "Many excellent discussions could not be used, either because of length or because editing would have destroyed the logic or continuity of the author's presentation." On the whole, the range of materials is excellent. The editors have mined the older classics of the Webbs, Hoxie and Gompers, as well as the more contemporary analyses of Perlman, Slichter, Hill and Hook, Golden and Ruttenberg, Dunlop, Leiserson and Hardman. Of special value are the selections from out-of-print sources, such as the Commission on Industrial Relations and the Senate Committee on Education and Labor, as well as reprints of articles from the Encyclopaedia of the Social Sciences, labor and industry periodicals and economic journals, which are rarely available in sufficient copies for class assignment.

Several limitations of the volume should, however, be pointed out to any who are contemplating its use as a single text. If the course serves as an introduction to labor problems, this book will have to be supplemented with materials on protective labor legislation and social security, fields which the editors have expressly excluded. If the course is a more advanced or specialized one in trade unionism and collective bargaining, the teacher will find the subject matter unevenly treated. One area of this field is more than adequately plowed. Both the selections and the editorial comments bear the impress of Bakke's own concepts and research. Hence a disproportionately large share of the book is given over to analyses of the political motivations of labor and management as they find expression in conflicts over union security, management prerogatives and industry-wide bargaining.

On the other hand, the treatment of wages and hours, while suitable for a course in labor economics, crowds out any adequate presentation of the terms of collective agreements. The chapter on hours, for example, is devoted mainly to a discussion of the optimum work week, while recent trends in collective bargaining on vacations and holidays are ignored. Similarly, the chapters on wages cover theories of wages and employment, but the student will remain unfamiliar with specific wage provisions and issues in collective bargaining such as incentive wages, merit rating and job evaluation. Although the editors reproduce the index of collective bargaining provisions prepared by the Department of Labor, they make no subsequent attempt to clothe many of the bones of this skeleton with flesh.

Another large gap in the collective bargaining sections is the omission of material to illustrate the varieties of collective bargaining experiences. Nor is there much information, except of a statistical nature, on the growth of collective bargaining among white collar, professional, and governmental workers.

In using this volume the teacher of collective bargaining will therefore do well to supplement it with more descriptive material on union agreement

provisions, case studies and arbitration awards. But this comment is meant not so much as a criticism of an excellent volume as a reminder that no single text will relieve the professor of some initiative and discretion and much hard work—a reminder that should be reassuring in these days of increasing technological threats to academic security! While welcoming this volume as a convenient aid to instruction, the teacher will still have many of his old jobs to perform as well as one new assignment suggested by this collection—that of responding to the editors' invitation to inform them of writings that "might present a subject in a better fashion than do those selected . . . so that revisions may profit by them."

JEAN TREPP MCKELVEY

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Survey of Labor Economics. By FLORENCE PETERSON. (New York: Harper. 1947. Pp. xix, 843. $4.00.)

The enormous interest in industrial relations at the moment makes a textbook which undertakes to survey the whole field of labor economics extremely welcome. Miss Peterson's book describes the important institutions and their functioning in labor relations, together with various theories, under four divisions of the subject: employment and unemployment, wages and hours, labor unions, and social security. Part One treats the subjects of population, the labor force, including as a novel feature a description of major types of employment, labor productivity, unemployment, with the usual classification of types, theories of unemployment, and unemployment relief and alleviation. Part Two presents the theory, nature and structure of wages, a description of "scientific" wage determination, wage supplements and wage regulation by government, and a description of hours and hour regulation. Part Three includes the history and structure of labor unions, the process of collective bargaining, institutional arrangements for dealing with labor disputes, analysis of the legal foundation of collective bargaining, and a discussion of contemporary problems in industrial relations. The last section, Part Four, deals with types of social insurance under the headings, "Old Age and Survivors' Insurance," "Unemployment Insurance," "Workmen's Compensation," and "Health and Disability Insurance." In the Appendix are printed the federal Anti-Injunction Law, the National Labor Relations Act, and the Fair Labor Standards Act.

The book has a number of excellent features. Although it covers a broad array of facts, the presentation has compactness, owing to the logical arrangement, good selection and supporting tables and graphs. The work, therefore, fills a need for both textbook and reference handbook. The facts are authentic and current, chosen in large part from government records. The author had immediate access to the official pool of labor data in the Department of Labor, and great facility in selecting what is significant. Hence, her book possesses a realistic character frequently absent from textbooks compiled from secondary and more fragmentary materials. The bibliographies appended to the various chapters are to be commended. The simple, direct style, free from technical terms, makes the book helpful to the general reader

and suitable for elementary courses in labor economics, particularly where libraries are deficient in documentary materials.

It would scarcely be fair to criticise the author for not including more within the eight hundred and fifty pages than she has, since the purpose was clearly not to offer an encyclopedic text on the order of Millis and Montgomery, or Daugherty, or Taft. The title, *Survey of Labor Economics*, however, and the author's statement of objectives in the preface, lead one to expect more economic analysis than one finds. Chapter after chapter of description ends abruptly, leaving the reader with the question, "Well, what of it? How are these economic data to be interpreted? How are they related to the whole economy?" Numerous opportunities for assaying the economic significance of new trends seem to have been passed over, such, for example, as industry-wide collective bargaining. It is true that there are sections and chapters on theory as such—population theory, wage theory, unemployment theory—but they are not adequately integrated with the excellent accompanying descriptive material. One wonders why isolated discussions of theory are inserted. They are too summarily presented to do more than confuse the student who is not well acquainted with the history of economic institutions and ideas, and apparently are not taken seriously by the author, who states, for example, on page 7, "Theories of population may be laid aside, then. . . ."

While the author's access to, and wise use of, voluminous material from government agencies gives this text unusual strength, presentation of such information from the point of view of any particular agency has doubtful value. For example, Part Four, which we are told in the preface was in large part prepared by an official of the Social Security Administration, seems to the reviewer to reflect primarily the interests and point of view of that agency, which one may discover by comparing the chapters with the agency's official publications. While one may have no quarrel with that point of view, the student is entitled to the presentation of some alternative proposals. The reviewer, as a teacher, would prefer that the section afforded a broader perspective, a more adequate explanation of the theory of social security, and of the distinction between public assistance and social insurance, and a comparative analysis of social security trends in other parts of the world.

Elinor Pancoast

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The Labor Force in the United States, 1890-1960. By John D. Durand. (New York: Social Science Research Council. 1948. Pp. xviii, 284. $2.50.)

The publication of John Durand's *The Labor Force in the United States, 1890-1960* is a striking measure of the progress achieved in the past decade in expanding and clarifying our knowledge of the nation's labor force, and of the economic and demographic factors that—together with employment customs—affect it. A short ten years ago, labor force analysis was severely handicapped both by inadequate concepts of labor force classification, and by a real dearth of quantitative data. The labor force, as understood then, consisted of the sum of the people who might be classified as having a gainful

occupation, and the dividing line between employment and unemployment had simply not been thought through adequately. The only quantitative data available were those of the Census of April, 1930, taken when the gainful worker concept still was in vogue, and the enumerative check census of 1937. As a result, one of the most sterile debates of all time was the argument of the depression years as to the volume of employment and the volume of unemployment.

Since then, we have had nearly nine years of experience with monthly labor force enumeration in the United States and a steady development of both labor force concepts and information. With this information in hand, and with the results of the prior decennial censuses adjusted to a comparable basis, Mr. Durand has analyzed past labor force trends and projected these trends into the future as far ahead as 1960. The Social Science Research Council and the Scripps Foundation for Research in Population Problems, whose joint efforts made this study possible, were fortunate in securing John Durand to conduct it. Having spent many years in the Bureau of the Census as an analyst of labor force trends and projections, he was ideally equipped to conduct this ground-breaking study.

He finds that from 1890 to 1940 the labor force increased from about 22 million workers to about 53 million, and that on the assumption of a continuation of prewar trends (modified somewhat by the permanent effects of the war on the labor force), it will probably increase to around 63.5 million by April, 1960. It should be noted that these figures, as most of the other data in the book, are on a basis comparable with the 1940 Census, and hence are lower by around 1.5 million than they would be were they made comparable with current labor force estimates. The usefulness of the book would have been increased had the projections been placed on a basis comparable with the current estimates, but this is a minor detraction.

While past increases have been due in large measure to changes in the population of the country, they have been considerably influenced by the composition of the population with respect to those characteristics which determine the ability and desire of people to work. These demographic factors—sex, age, race, nationality, marital status, women's family responsibilities, and the geographical distribution of the population—are discussed at considerable length against a background of factual data covering the last half-century. During this half-century, the proportion of the labor force to the total population rose from about 35 per cent to about 40 per cent, largely by reason of the demographic changes which have occurred. The lower birth rate reduced the proportion of the population consisting of children and at the same time lessened the home-making responsibilities of women; and the shrinkage of the farm population as a proportion of the total tended to increase female employment more than it reduced male employment. Other factors— the increase in the proportion of older persons and of married women—have been only partially offsetting.

Long-range economic developments have reinforced these trends. Technological developments have opened employment opportunities for women and reduced them for older men, with white-collar and professional occupa-

tions (where women can find employment) expanding as self-employment (where older men are concentrated) has declined. The rise in *per capita* income has not only made possible later entrance into employment, but has encouraged earlier retirement. And the reduction in hours of work, combined with the introduction of mechanical housekeeping aids and the development of commercial services for the home, has increased the propensity of women to work.

Durand discusses the short-range impact on the labor force of economic factors, and finds that both the *a priori* arguments and the fragmentary data regarding the effects of peacetime fluctuations in employment and income on the size or composition of the labor force are inconclusive and contradictory. He concludes that it would be rash to try to predict, on the basis of present information, how the labor force will be affected by depressions or booms in the future.

While this reviewer recognizes the contradictory and inconclusive nature of the statistical evidence, certain forces operating in response to short-run economic changes in income and employment seem to be at least moderately predictable. Given a depression, many persons not normally in the labor force will certainly be more inclined than before to accept employment. Some will secure jobs, some will seek work without success, and many will be in that difficult fringe group—the inactive unemployed. Also, it seems clear that the effect of depression on lowering marriage and birth rates will serve, in time, to add to the employability of young women. These factors may be offset, particularly in a long depression, by the premature retirement of workers discouraged by the hopeless employment outlook, and by a movement to farms which reduces employment opportunities for women.

In periods of high and inflationary prosperity such as the present, it appears likely that the balance of divergent forces also leads to an expansion of the labor force. Readily available well-paid jobs (particularly when the dollar wage is far above the rate of remuneration to which the mind became accustomed in an earlier period) combines with the pinch of rising living costs to induce many non-workers to accept employment.

In any event, year-to-year fluctuations in the labor force—whatever their causes and whatever their direction—are not likely to be very large under peacetime conditions. One reason for this is the inertia of habit and tradition as they affect employment customs. It is only over considerable periods of time that employment customs undergo change. Custom governs in large measure the age at which young people enter the labor market, just as it controls the general view of society concerning the age at which a person is too old to work, or the occupations properly open to women. In all these instances, change in one generation breeds continuing change in the successive generation. Longer schooling is self-perpetuating, for it encourages even longer schooling as a measure of progress; earlier retirement changes the age socially regarded as appropriate for retirement; and the increasing recognition of the right of women to work is in part a result of the increase in the number actually at work. According to Durand, "the autonomous influence of the development of customs upon labor force trends can be

likened to the effect of a flywheel on the operation of a motor—evening and tending to continue the motion once begun." The major change in custom in the twentieth century—the employment of women—he analyzes in detail.

The concluding chapters of the book deal with the World War II expansion and contraction of the labor force, future labor force projections, and demographic aspects of labor force policy. In view of the national policy of the government, as incorporated in the Employment Act of 1946, to promote maximum employment "by all practicable means," this latter discussion is particularly timely. Should "full employment" goals for 1960 be based on a projected 63,500,000 labor force, or should a positive national policy with reference to the growth and composition of the labor force attempt to alter trends that would otherwise follow?

The three major groups that would be affected by a national labor force policy are young people, older workers, and women. As regards youth, his projections show only about 24 per cent of all boys and 11 per cent of all girls aged 14 to 19 in the labor force in 1960, in contrast to 1940 percentages of 38 and 19, all figures being for the month of April and on a basis comparable with current labor force estimates. The assumed continuation of this long-term downward trend would materially reduce the quantity of young labor available to the country in future years. The question is, how large an investment of manpower in education is justified? The answer, which should be formulated as a part of national employent policy, depends on national requirements for education and national capacity for financing it. Neither of these magnitudes is subject to easy measurement and determination, but an intelligent labor force policy requires that they be determined.

In this connection, this reviewer thinks that it is by no means certain that the long-term trend toward less labor force participation by teen-age youths will in fact reappear in the foreseeable future. During the late war, the percentage of boys aged 14-19 in the labor force rose to 67 in April, 1945, with 40 per cent for girls. If the long-run trend were going to reassert itself, these high wartime percentages should have been considerably reduced by April, 1948—nearly three years after the war. What we find, however, is that as of that latter date, 50 per cent of all boys from 14-19 years of age were in the labor force, and nearly 30 per cent of all girls. Many of these youths were engaged in part-time work only and some were unemployed, but the fact remains that an abnormally high proportion of teen-agers are in the job market. It suggests that the war experience plus abundant postwar job opportunities have changed, perhaps permanently, the work habits of young people. Part-time jobs during the school year, with full-time jobs during vacations, are much more "normal" in present day American society than in the 1920's and 1930's, and may serve to more than counterbalance for some time to come any tendency for longer education to reduce the volume of work done by American youth.

The long-run trend toward early retirement of men past middle age probably should be reversed by national policy if possible, for it has apparently been due largely to the lessening of employment opportunities, rather than to a voluntary choice of leisure over work. The problem involves public

health programs, emphasis on the employment of handicapped groups, special placement services for this group, publicity campaigns to dispel prejudice against older workers, financial incentives to employers, and perhaps even differential wage rates based on productive capacity. It also obviously involves integration with social security programs.

The employment of women, which has expanded so greatly in the past and which gives every indication of continuing to expand, needs to be considered in terms of social welfare as seen from a non-economic point of view. The projected increase in the proportion of women in the labor force, from 29 per cent of the female population aged 20-64 in 1940 to 37 per cent in 1960, raises serious question regarding the economic pressures forcing some women to work, the care and training of children outside the home, the role of the family in American society, and the effect of such widespread female employment on the birth rate. Durand does not answer these questions: instead, he makes a persuasive case for careful analysis of them and the formulation of a national labor force policy.

Economists who haven't thought seriously about the labor force in the United States in the past few years will be well advised to examine this book. Those whose work involves projections of labor force trends will find it invaluable. Particularly useful to the specialist are the several appendixes, which include full descriptions of the methods used by the author in his various computations, and also a comprehensive labor force bibliography classified according to subject matter.

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Trade Union Wage Policy. By ARTHUR M. ROSS. (Berkeley and Los Angeles: Univ. of California Press. 1948. Pp. xii, 133. $3.00.)

Throughout the historical development of theories of the distribution of wealth, wage theory has long been the most troublesome. Neat systems have been devised again and again, but none have been wholly convincing to many economists for a substantial length of time. It now seems probable that these repeated failures are attributable to the fact that economists have traditionally sought to deal with wage determination as though it were solely the result of economic forces. This is not to say that the economic aspects of wages are negligible; they are of course important. But the political, psychological, and sociological factors enter with such force that wage theory cannot be a mere adaptation of price theory. This is apparently true to such an extent that a satisfactory explanation of wage determination, stated an an all-embracing theory, cannot be devised until after all of the institutional characteristics of labor-management relations have been described, analyzed, and given suitable weight. Only after this has been accomplished can a really useful theory be developed.

Among the contemporary pioneers in this important work, the name of Arthur M. Ross must now be added to those of John T. Dunlop, Joseph Shister, and the dozen or so other economists who have contributed special ideas in the form of journal articles. Professor Ross is engaged in the building

process—he does not claim to have completed the structure. But there is no doubt that he is building with hard stone and sound mortar, and that his part of the wall has an excellent chance of survival.

The six principal chapters in this volume were originally published as separate articles in four different economic periodicals: the *American Economic Review,* the *Southern Economic Journal,* the *Quarterly Journal of Economics,* and the *Proceedings* of the Pacific Coast Economic Association. Excepting for the introductory chapter and minor changes elsewhere, therefore, it presents nothing which has not previously been published. Unfortunately, the five chapters do not yet constitute a "book," for they are still five articles on five aspects of the problem of trade union wage policy. Their publication in this volume is useful because it brings them together in readily accessible form, but they do not provide a rounded and balanced book. Although the reviewer must point this out to potential readers, the author need make no apology since he did not intend otherwise. He has studied five problems and has released the results for the consideration of scholars everywhere. However, he has by no means completed his study of wages.

Following the introductory chapter, Ross deals with "The Trade Union as a Wage-Fixing Institution," in which he picks up the theme of Wight Bakke and argues that a union is primarily interested in institutional survival and growth. As such, its wage policy is largely determined by internal political pressures. From this he proceeds to "The Dynamics of Wage Determination Under Collective Bargaining," in which he applies the principles of the preceding essay to a large variety of specific problems. From this he turns to answer the question "What is a Responsible Wage Policy?" The core of this chapter is the proposition that "the employment effect of a wage adjustment is unpredictable before the fact and undecipherable after the fact." In "Union-Management Relations and the Wage Bargain" Ross brings in the influence of management policy. The concluding essay, "The Influence of Unionism upon Earnings," makes a strong case for the proposition that union activities have in fact exerted a marked upward effect upon wage levels.

Many economists will look with some disapproval upon Ross's institutional approach, others will disagree with his conclusions. But no economist interested in wages can safely ignore his work. The results of the further investigations which he promises will be awaited with widespread interest.

It should be added that this volume is a publication of the Institute of Industrial Relations at the University of California in Berkeley. Professor Ross is chiefly responsible for the series of studies, but enjoyed the assistance of his staff colleagues. It stands as evidence of the research effectiveness of such an Institute.

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NOTES

The annual meeting of the American Economic Association will be held at the Hotel Cleveland, in Cleveland, Ohio, December 27-30, 1948. A preliminary program was announced in the September number and a more complete program has been sent to all members with a ballot for the election of officers for the coming year.

The following persons have recently become members of the AMERICAN ECONOMIC ASSOCIATION:

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The American Statistical Association has established a Commission on Statistical Standards and Organization. Members of the Commission are: Lowell J. Reed, Samuel S. Wilks, Isador Lubin, Frank W. Notestein, Frederick E. Croxton, and Walter A. Shewhart. The announced functions of the Commission are: to provide a tribunal to render opinions and recommendations on controversial issues relating to statistical procedure and presentation of statistical material; to develop a list of minimum standards for published statistical material; upon request from governmental bodies, to review actual or proposed undertakings and make recommendations relative to standards.

The Carnegie Corporation has made a grant of $130,000 to the Social Science Research Council in support of a program of fellowships and travel grants for research in world areas. These funds will enable the Council to continue its national fellowship program set up last year to assist students, teachers and research workers to carry on field work in foreign countries. Further information may be secured from Mr. Elbridge Sibley, Executive Associate, Social Science Research Council, 726 Jackson Place, N.W., Washington 6, D.C.

Announcement has been made of the founding and commencement of operation of the Shinner Political Economy Research Foundation, which will specialize on problems of monopoly and business-government relations designed to guard against depressions and strengthen the competitive system. The founder is Ernest G. Shinner, a Chicago businessman and banker. A research office was opened at 816 21st Street, N.W., Washington, D.C., during May of 1948. David Cushman Coyle has been appointed Director of Research. Marshall E. Dimock, President, Ernest G. Shinner, Vice President, and Stuart Chase and the Honorable Estes Kefauver comprise the board of four, which will later be enlarged. Projects slated for early attention are the administration of the antitrust laws and the relation between size and efficiency in the structure of business enterprise. The Foundation hopes to enlist the voluntary interest of university specialists, businessmen, and government officials in carrying out various parts of its program. The Foundation will employ or make awards to competent and creative scholars and make fellowship awards. The officers and directors solicit suggestions and proposals.

The Social Sciences Division and the Graduate Library School, University of Chicago, aided by a grant from the Carnegie Corporation, are jointly undertaking a study of the desirability and feasibility of setting up a unified reporting service for the social sciences. Opinions of social scientists, teachers, students, librarians, public officials, interest-group leaders and other potential users are being collected with regard to the relative advantages of a yearbook; a journal containing abstracts; a journal consisting largely of bibliographic essays; and other means of publication. The study is being conducted by Bruce Lannes Smith, political scientist, aided by the following advisory commttee: Bernard Berelson, dean of the Graduate Library School; Fred Eggan, anthropology; Herbert Goldhamer, sociology: Louis Gottschalk, history; Nathan Leites, political science; Ralph W. Tyler, dean of the Social Sciences Division; W. Allen Wallis, statistics and business economics.

During the summer of 1948 an economics division was added to the RAND Corporation in Santa Monica, California. RAND is an independent non-profit research corporation, until recently attached administratively to the Douglas Aircraft Company, and is engaged in research on broad phases of national security under contract with the United States Air Force. The economics division is under the direction of Charles J. Hitch, formerly at Queen's College, Oxford. Other senior members of the economics staff are Stephen Enke,

Joseph A. Kershaw and Russell Nichols. Consultants who are devoting some time to the research now in progress include W. Allen Wallis, Paul Samuelson, Tjalling Koopmans, Armen Alchian, Mortimer Andron, Carl Kaysen, Edwin S. Shaw, Bernard Haley, Tibor Scitovszky, Moses Abramovitz, Lorie Tarshis, Raymond Goldsmith, and Harold Barnett.

Representatives of ten up-state New York colleges organized a Central New York Economics Conference at Wells College in the spring of 1948. A second meeting was held at Colgate University in October. A spring meeting is planned, to be held at Syracuse University.

Charles W. Gerstenberg, co-founder and for many years chairman of the Board of the publishing house of Prentice-Hall, Inc., and formerly professor of finance and secretary of New York University School of Commerce, Accounts and Finance, succumbed to a heart attack on September 15, 1948.

Wesley C. Mitchell, formerly president of the American Economic Association, died of a coronary thrombosis on October 29, 1948. A memorial will appear in an early number of this *Review.*

Appointments and Resignations

Ruth Albert has been appointed sessional professor of economics at McGill University.

Frederick Amling has been appointed instructor in economics and business administration at the University of Maine.

Graydon K. Anderson has been appointed instructor in economics at the University of Wisconsin.

J. D. Anderson is instructor in economics at the University of Florida.

John W. Anderson has been appointed instructor in business administration at the University of Maine.

O. J. Anderson has been appointed instructor in business organization and management in the College of Business Administration, University of Nebraska.

Paul H. Anderson, formerly director of marketing research for the U. S. Department of Commerce, is now professor of marketing at Loyola University, New Orleans.

T. J. Anderson has been promoted from associate professor to professor of econmics in the School of Commerce, New York University.

Daniel K. Andrews has been appointed assistant professor of economics at the University of Utah.

William H. Andrews, formerly of Purdue University and the Cowles Commission, has been appointed assistant professor of economics, Indiana University.

Floyd E. Armstrong, formerly professor of economics and finance at the Massachusetts Institute of Technology, will serve as lecturer in economics at the University of Michigan during the current academic year.

L. D. Ashby has been promoted to associate professor of economics at the University of North Carolina.

Mary B. Aull has been appointed research assistant in the Bureau of Business Research, College of Commerce, University of Kentucky.

Kenneth Back has been appointed research assistant in the Bureau of Business Research, College of Commerce, University of Kentucky.

Henry G. Baker has been promoted from associate professor to professor of economics and director of the Bureau of Business Research, Oklahoma City University.

Iris Baker has joined the staff of the department of economics of Southern Illinois University.

E. Dale Barton has been appointed instructor in marketing at the University of Utah.

Hubert Baughn, formerly of the University of Virginia, has been appointed associate professor of economics at Louisiana State University.

G. E. Bell is teaching assistant in accounting at the University of Florida.

Emile Benoit-Smullyan has resigned as head of the department of economics of the Associated Colleges of Upper New York to accept a post as economic analyst for the U. K. mission of the Economic Cooperation Administration.

Robert H. Bethke has been appointed assistant vice president of the Discount Corporation of New York.

John S. Bickley has resigned from the University of Alabama to accept a position as acting assistant professor of insurance at the University of Washington.

Wilbur T. Billington has accepted a position as instructor in economics at the University of Minnesota.

Roy G. Blakey retired as professor of economics at the University of Minnesota in June and is a visiting professor at the University of California at Los Angeles for the summer and fall terms.

C. Perry Bliss has been appointed instructor in economics in the School of Business Administration and the College of Arts and Sciences, University of Buffalo.

Francis M. Boddy, professor of economics at the University of Minnesota, is on sabbatical leave for the year 1948-49. He was in Europe during the summer and will spend the remainder of the year in study in the United States.

Floyd A. Bond has resigned as associate professor of economics at Carleton College to become professor of economics and chairman of the department of economics, Pomona College.

Harold Borgen has been appointed graduate assistant in the department of economics, College of Business Administration, University of Nebraska.

Nathan Borofsky has been promoted from senior assistant to instructor in economics in the School of Commerce, New York University.

P. F. Boyer has been promoted from assistant director to director of the Division of Research, College of Commerce, Louisiana State University.

Charles E. Bradley, Jr., has resigned as instructor in economics at the University of Utah.

Michael Brand, formerly of New York University, has been appointed instructor in economics at the University of Florida.

George F. Break has been appointed lecturer in economics at the University of California, Berkeley.

Irving Brecher has been appointed assistant professor of economics at McGill University.

Richard C. Brewer, formerly of the University of Minnesota, has joined the staff of the University of Alabama as assistant professor of accounting.

Norman S. Buchanan has resigned as professor of economics at the University of California and has accepted an appointment as assistant director of the Division of Social Sciences, Rockefeller Foundation.

Van Dyke Burhans has joined the staff of the department of economics, Boston University.

Emory P. Burnett has been appointed instructor in economics, College of Business Administration, University of Nebraska.

Lloyd Callow has been appointed teaching assistant in the School of Business, University of Chicago.

Leslie E. Carbert has been appointed lecturer in economics at the University of California, Berkeley.

Robert E. Carlson has resigned as instructor in economics at the University of Minnesota to study at the University of London.

Sue Carlson is an instructor in statistics at the University of Florida.

Allan Cartter has resigned as instructor in economics at Colgate University to study at the Labor and Management Center of Yale University.

Russell W. Castle has joined the staff of the School of Business Administration of the University of Pittsburgh as instructor in economics.

A. Aldo Charles, formerly of Mary Washington University, has been appointed professor of business law at the University of Georgia.

William C. Cleveland, associate professor of economics at Indiana University, is on sabbatical leave for the first semester of the current academic year.

Jerome B. Cohen, of the College of the City of New York, has been appointed consultant to the Division of Research for the Far East, Department of State.

Paul C. Cohen has been appointed part-time instructor in economics at Northwestern University.

Robert H. Cojeen, formerly of the University of Florida, has been appointed associate professor of accounting in the College of Commerce, University of Kentucky.

Frederick E. Cole has been named extension specialist in marketing in the department of agricultural economics, University of Massachusetts.

Raymond Coleman is now head of the department and professor of economics and business administration at West Virginia University.

Newell W. Comish is an instructor in marketing at Ohio State University.

James A. Cook, formerly of the College of the City of New York, has been appointed associate professor of marketing in the College of Business and Public Administration, University of Maryland.

William W. Cooper has been promoted to associate professor of economics at Carnegie Institute of Technology.

Hazel Cowherd has joined the faculty of Denison University as assistant professor of economics.

J. P. Day who retired as Angus professor of economics at McGill University in 1946 has been named professor emeritus.

Melvin G. de Chazeau, formerly professor of business economics and marketing in the School of Business, University of Chicago, has accepted a similar appointment at Cornell University.

Roger Dehem has been appointed directeur adjoint de reserches économiques in the Université de Montreal but will also continue as lecturer in economics at McGill University.

Raymond C. Dein, formerly assistant professor of accounting at the University of Wisconsin, has been appointed associate professor of accounting in the College of Business Administration, University of Nebraska.

Gordon Donald, Jr., has been appointed assistant professor of economics in the School of Business Administration, University of Massachusetts.

William L. Doremus, assistant professor of marketing, School of Commerce, Accounts, and Finance, New York University, has been appointed to the faculty of the Graduate School of Business Administration, New York University.

Lawrence S. Dreiman has resigned as chief of the Fiscal and Price Policy Branch, United States Element, Allied Commission for Austria, to join the staff of the U. S. Special Representative, European Cooperation Administration, in Paris.

James Duesenberry has been appointed assistant professor of economics at Harvard University.

Otto H. Ehrlich is an adjunct assistant professor of economics at New York University, Washington Square College.

Milford D. Estill has been appointed research assistant in the Bureau of Business Research, College of Commerce, University of Kentucky.

Elizabeth T. Evans has been appointed instructor in business administration at the University of Maine.

Mary Evins has been named research assistant in the Bureau of Business Research, University of Kentucky.

Solomon Fabricant, has been promoted from associate professor to professor of economics, School of Commerce, New York University.

David I. Fand has been appointed instructor in economics at Brown University.

Frank Farnsworth has returned to Colgate University as assistant professor of economics after a year's leave of absence at Harvard University as visiting research fellow in human relations.

Raymond F. Farwell has rejoined the faculty of the University of Washington as professor of transportation after serving in the U. S. Navy six years.

Michael Florinsky has been appointed acting assistant professor of economics, School of Commerce, New York University.

C. Lloyd Francis has been appointed lecturer in economics and industrial relations in the School of Business Administration and the College of Arts and Sciences, University of Buffalo.

Lewis A. Froman, formerly dean of Millard Fillmore College, University of Buffalo, has been named the fourth president of Russell Sage College, Troy, N.Y.

B. L. Frost has been appointed graduate assistant in the Bureau of Business Research, University of Florida.

J. Kenneth Galbraith has been appointed lecturer in economics and director of agricultural and marketing research in the department of economics, Harvard University.

Walter Galenson has been appointed assistant professor of economics at Harvard University.

Philip L. Gamble, of the department of economics, has been appointed acting dean of the new School of Business Administration at the University of Massachusetts.

Carmi Gamoran has been appointed assistant in the department of economics, School of Commerce, New York University.

James E. Gates has been appointed dean of the College of Business Administration, University of Georgia.

Franz Gehrels has been appointed acting instructor in economics at Stanford University.

Raymond W. Goldsmith is directing a two-year study of saving and the capital market, sponsored by the Joint Committee on Investment Research of the American Life Convention and the Life Insurance Association of America.

Bernard Goodman has been appointed instructor in economics at the University of Oregon.

H. S. Gordon, of McGill University, has been appointed assistant professor of economics at Carleton College.

Russell S. Grady, formerly of the University of Florida, has been appointed associate professor of accounting in the College of Commerce, University of Kentucky.

Frank M. Graner has been appointed assistant professor of finance at the University of Wisconsin.

Edith H. Green is giving full-time instruction in economics at Barnard College.

H. A. John Green, of Brasenose College, Oxford University, has been appointed visiting lecturer in economics at Clark University.

James Green has joined the staff of the University of Minnesota as instructor in economics.

George Greening has been appointed instructor in economics at Lafayette College.

Davis R. Gregg is assistant professor of insurance at Ohio State University.

Eugene Griner has joined the staff of the College of Business Administration, University of Georgia as an instructor in economics.

Edward D. Gruen, formerly of the University of Cincinnati, has been appointed assistant professor of finance and statistics at the Tuck School of Business Administration, Dartmouth College.

Emile Grunberg, formerly of the University of Akron, is now assistant professor of economics at Carnegie Institute of Technology.

G. A. Gustafson has been appointed instructor in accounting at Louisiana State University.

Warren J. Gustus has been appointed instructor in economics at Brown University.

William Haber, professor of economics at the University of Michigan, will continue to serve as Special Adviser on Displaced Persons to General Lucius Clay, Office of Military Government of the United States, in the first semester of the current academic year.

Mary A. Hahn has accepted an appointment as instructor in economics at Pomona College.

Williams E. Haines has been appointed instructor in economics at Duke Univeristy.

John I. Hale has been appointed associate professor of business organization and industrial management, College of Business and Public Administration, University of Maryland.

Bernard F. Haley has resigned from the executive headship of the department of economics at Stanford University, a position he has held, except for the interlude of World War II, since 1931.

Sanford B. Halperin has been appointed teaching fellow in statistics and insurance in the School of Business Administration, University of Buffalo.

J. Whitney Hanks, of the University of Utah, was a visiting instructor in the 1948 summer session of Indiana University.

Frank A. Hanna, formerly with the Bureau of the Census, has ben appointed associate professor of economics at Duke University.

James W. Hanson has been appointed graduate assistant in the department of economics of the College of Business Administration, University of Nebraska.

Robert W. Harbeson, until recently principal economist with the Interstate Commerce Commission and now at the University of Illinois, served as visiting professor in the 1948 summer session at Harvard University.

F. K. Hardy has resigned from Michigan State University to become associate professor of marketing at the University of Florida.

F. F. Hargrave, who has retired as professor of economics at Purdue University, has been named professor emeritus.

Thomas R. Hart has been appointed teaching fellow in statistics and insurance in the School of Business Administration, University of Buffalo.

Durwood C. Harvey has been appointed instructor in economics and commerce at the University of Chattanooga.

Dale E. Hathaway has been appointed instructor in agricultural economics at Michigan State College.

George R. Hawkes has resigned as an instructor in the College of Business Administration, University of Nebraska, to pursue graduate work at the University of California at Los Angeles.

Harold J. Heck, professor of foreign trade and chairman of the Division of Economic and Business Research, Tulane University, has been named director of research for International House, New Orleans.

Walter W. Heller has resumed his teaching at the University of Minnesota as associate professor of economics after serving as special tax consultant to the U. S. Military Government of Germany.

Charles N. Henning has resigned from the Department of Commerce to accept a position as acting assistant professor of finance at the University of Washington.

Stuart J. Higginbotham, formerly visiting lecturer at the University of Pittsburgh and New York University, has been appointed assistant professor of retailing at the University of Chattanooga.

Benjamin Higgins has been granted two years' leave of absence from McGill University to accept an appointment as Ritchie professor of economics at the University of Melbourne.

Clifford Hildreth has been promoted to an associate professorship at Iowa State College.

Heinrich Hoeniger has been promoted from associate professor to professor of economics at Hunter College.

Calvin B. Hoover, of Duke University, acted as director of the Office of Program Review and Recovery Progress with the U.S. special representative in Europe in the summer of 1948.

J. L. Hoover has resigned as professor of commerce in the College of Commerce, University of Kentucky.

Charles E. Houston has been appointed associate professor of business administration at Emory University.

Dorothy Howard is a graduate assistant in economics at the University of Florida.

Don D. Humphrey has resumed his teaching at Duke University as professor of economics after having served as economic advisor to General Lucius Clay with the Office of Military Government of the United States.

Kenneth H. Hunter has been promoted to professor of economics and reappointed chairman of the department of economics, College of Arts and Sciences, American University.

William A. Hurst has been appointed acting instructor in economics at Stanford University.

John R. Immer, of the University of Minnesota, spent the summer in England carrying on special studies in factories there.

Walter Isard has been appointed associate professor of economics and associate director of the Teaching Institute of Economics at American University.

James M. Jarrett, formerly assistant head, Business and Industrial Research Division, Income Tax Unit, Bureau of Internal Revenue, has been appointed economic advisor to the chairman of the Excess Profits Tax Council.

Louis Jordan is an instructor in accounting at Alabama Polytechnic Institute.

Carl Kaiser has not joined the staff of Denison University as reported in this journal in September. He is continuing as professor of economics at Pennsylvania College for Women.

Donald R. Kaldor has been promoted to associate professor of economics at Iowa State College.

Joseph Keiper has been promoted from instructor to assistant professor of economics in the School of Commerce, New York University.

Jane Kennedy is an assistant in the department of economics of Barnard College.

William Kessler has been promoted from associate professor to professor of economics at Colgate University.

Wylie Kilpatrick has accepted the position of research economist, Bureau of Research, University of Florida.

Milo Kimball has been appointed associate professor in the School of Business Administration, University of Massachusetts.

Charles P. Kindleberger, formerly chief of the Division of German and Austrian Economic Affairs and adviser in the Office of Financial and Development Policy, Department of State, has accepted an appointment as associate professor of economics at Massachusetts Institute of Technology.

Paul Kircher, formerly of the University of Michigan, has been appointed instructor in accounting in the School of Business, University of Chicago.

Paul L. Kleinsorge has been appointed associate professor of economics at the University of Oregon.

Burton A. Kolb has accepted an appointment as instructor in finance at the University of Washington.

Tjalling C. Koopmans has been promoted to professor of economics at the University of Chicago. He has also been named director of research of the Cowles Commission for Research in Economics.

Richard F. Kosobud has been appointed an associate in industrial management at the University of Washington.

Clifton H. Kreps, Jr., has been appointed assistant professor of economics at Denison University.

Juanita M. Kreps has been appointed assistant professor of economics at Denison University.

Ernest Kurnow has been appointed instructor in economics in the School of Commerce, New York University.

Robert Lambert, formerly of the University of California, has accepted an appointment as instructor in economics at the University of Minnesota.

A. S. Lang, formerly of Texas State College for women, has accepted the position of dean of the School of Business and professor of economics at Baylor University.

A. Lermer, sessional lecturer in economics at McGill University, has been appointed associate professor of economics at Sir George Williams College.

Richard A. Lester will be on leave of absence from Princeton University during the spring term of 1949.

Marvin Levine has been appointed instructor in economics in the School of Commerce, New York University.

Richard W. Lindholm has been appointed associate professor of economics at Michigan State College.

Joseph E. Loftus, associate professor of economics at American University, has been appointed director of the Teaching Institute of Economics at American University.

James W. Longley has been appointed assistant professor of economics at Purdue University.

Richard S. Lopata is an instructor in the new School of Business Administration of the University of Massachusetts.

Robert Lynn is an instructor in business law at Ohio State University.

James MacPherson has resigned from the department of economics of the College of Business Administration, Boston University.

Zenon S. Malinowsky has been appointed teaching assistant in the School of Business, University of Chicago.

Julia Maloney has been appointed instructor in business administration at Louisiana State University.

Alfred Manes, who has retired from teaching at Indiana University, has accepted an appointment as professor of economics and insurance at Bradley University, Peoria, Illinois.

Arthur W. Marget has resigned as professor of economics at the University of Minnesota and has accepted an assignment as special financial adviser, U. S. Embassy, Paris.

John M. Mattila has resigned as teaching fellow at Indiana University to accept an instructorship in economics at Wayne University.

Eugene A. Mawhinney has been appointed instructor in economics at the University of Maine.

James A. Maxwell has been appointed chairman of the department of economics and sociology at Clark University.

Kenneth H. McCartney has been appointed instructor in economics at the University of Minnesota.

Paul W. McCracken has resigned as director of research at the Federal Reserve Bank, Minneapolis, and has joined the faculty of the University of Michigan as associate professor of business conditions.

Frank H. McDonald has been appointed instructor in economics at the University of Maine.

Joseph L. McDonald, professor of economics at Dartmouth College, will be on sabbatical leave of absence during the second semester of the current academic year.

Edmund D. McGarry, professor of marketing and economics in the School of Business Administration and the College of Arts and Sciences, University of Buffalo, is on sabbatical leave of absence this semester.

Dan M. McGill has been appointed Julian Price associate professor of life insurance at the University of North Carolina.

L. P. McGrath has resigned from the College of Business Administration, University of Georgia.

Thomas F. McHugh, formerly of the University of Arkansas, has joined the staff of the College of Business and Public Administration of the University of Maryland as an assistant professor.

George Michalson is an instructor in the field of transportation at the University of Minnesota.

C. M. Millican has been appointed teaching assistant at the University of Florida.

Michael S. Mirski, of the department of economics of Columbia University, has been appointed a Hoover Institute senior fellow in Slavic studies at Stanford University.

H. H. Mitchell is serving as part-time instructor in economics at the University of North Carolina.

Daryl Mitton has accepted an appointment as instructor in economics at the University of Minnesota.

Arthur E. Monroe has resigned as faculty lecturer in the department of economics, Harvard University.

Frederick T. Moore has been appointed lecturer in economics at the University of California, Berkeley.

J. F. Moore has been appointed instructor in accounting at the University of Florida.

Lloyd F. Morrison has been appointed associate professor of accounting at the University of North Carolina.

Felix Muehlner is a lecturer in finance in the School of Business Administration, University of Buffalo.

Eva Mueller has been appointed instructor in economics in the School of Business Administration and the College of Arts and Sciences at the University of Buffalo.

William A. Murphy has been appointed associate professor of marketing at the University of Utah.

L. J. Nachtrab has been promoted from assistant professor to associate professor in the College of Business Administration, University of Georgia.

Simon Naidel has been appointed lecturer in economics at American University.

Helen O. Nicol, formerly of George Washington University, is teaching economics at the University of Hawaii.

Harold Nielsen has returned to the University of Minnesota as an instructor after teaching a year at the University of Kansas.

Oswald Nielsen, formerly a lecturer in accounting at the University of Minnesota, has been appointed associate professor of accounting at Stanford University.

John A. Nordin has been promoted to an associate professorship at Iowa State College.

D. B. Odom has been appointed instructor in accounting at the University of Florida.

John J. O'Hara, formerly of the University of Minnesota, has accepted a position on the faculty of the College of St. Thomas, St. Paul, Minnesota.

Harry Oshima has resigned as assistant professor of economics at American University to continue graduate studies.

William B. Patton has been appointed instructor in economics at the University of Minnesota.

George S. Peck has resigned from Indiana University to accept an appointment as assistant professor of economics at the University of Mississippi.

H. Austin Peck, formerly of Tufts College, has been appointed instructor in economics at the University of Maine.

George S. Petras has joined the staff of the College of Business Administration, University of Georgia, as instructor in economics.

R. C. Pratt, formerly Drummond fellow at McGill University, has been appointed lecturer in economics at Mount Allison University.

Howard H. Preston, of the University of Washington, is on leave of absence in the fall and winter quarters to act as consultant in the establishment of a College of Commerce at Hangchow Christian University, China, and to lecture at Chinese universities.

Stanley W. Preston has been promoted from associate professor to professor of business administration, Louisiana State University.

Porter Raley has left the University of Kentucky Bureau of Business Research.

Leonard Rall has been appointed associate professor of economics at Michigan State College.

B. U. Ratchford, of Duke University, was deputy director of the Office of Program Review and Recovery Progress with the U.S. special representative in Europe last summer.

Sidney Ratner has been promoted from assistant professor to associate professor at Rutgers University.

Alfred S. Ray has been appointed instructor in economics at the University of Michigan.

Robert A. Rennie has been appointed assistant professor of political economy at the Johns Hopkins University.

Robert L. Rivers has been appointed instructor in the new School of Business Administration at the University of Massachusetts.

Dorothy Robbins has been appointed part-time instructor in economics in the College of Business Administration, University of Nebraska.

Laurie S. Robertson has been appointed instructor in economics in the College of Business Administration, University of Nebraska.

Frank J. Robinson has resigned from the University of Washington to accept an appointment as associate professor of management at Washington University, St. Louis.

Earl R. Rolph has been promoted to associate professor of economics at the University of California, Berkeley.

Costic Roman has joined the staff of the College of Business Administration, University of Georgia, as an instructor.

J. H. Roseboom has been appointed instructor in economics at Indiana University.

Alice Rosler, formerly of Nuffield College, Oxford, has resigned from the staff of the department of economics of Indiana University to accept a position as assistant professor of economics at the University of Toledo.

Eugene Rotwein has been promoted to the rank of assistant professor in the department of economics at the University of Wisconsin.

Clyde O. Ruggles, who recently retired as professor of public utilities in the Graduate School of Business, Harvard University, is at Ohio State University as a visiting professor during the current academic year.

Davis J. Saposs has been granted leave from his position as special assistant to the U.S. Commissioner of Labor Statistics to act as special adviser to the Labor and Manpower Branch of the European headquarters of the Economic Cooperation Administration in Paris.

Sheldon Schaffer has been appointed instructor in economics at Clark University.

Howard G. Schaller has joined the staff of the department of economics, Alabama Polytechnic Institute.

James S. Schindler, formerly of the University of Michigan, is assistant professor of accounting in the School of Business Administration, University of Buffalo.

Edward B. Schmidt has been promoted to associate professor of economics in the College of Business Administration, University of Nebraska.

Albert N. Schrieber has been appointed assistant professor of management at the University of Washington.

Eli Schwartz has been appointed part-time instructor in economics at Brown University.

David Schwartzman has been appointed lecturer in economics at McGill University.

Scott E. Seager is an instructor in economics in the School of Business, University of Utah.

Edward W. Seay, formerly of Knox College, has assumed the presidency of Centenary Junior College in Hackettstown, N.J.

George Sebba has been promoted from associate professor to professor of economics in the College of Business Administration, University of Georgia.

Lewis Severson has resigned as head economist in the Treasury Department and has returned to his former position as chairman of the department of economics at Beloit College.

Harry Shaffer has accepted an appointment as instructor in economics and business administration at Concord College, Athens, West Virginia.

Eli Shapiro has been promoted to associate professor of finance in the School of Business, University of Chicago.

E. S. Shaw has been appointed acting executive head of the department of economics at Stanford University.

Harry F. R. Shaw, professor of economics at Dartmouth College, will be on sabbatical leave of absence during the second semester of the current academic year.

Jack Shelton has been appointed research assistant in the Bureau of Business Research, College of Commerce, University of Kentucky.

Louis Shere, formerly of the U.S. Treasury Department, has been appointed professor of economics and director of tax research at Indiana University.

J. W. Simpson has resigned from Purdue University to accept a position as assistant professor of economics at Michigan State Normal School.

C. Frank Smith has resigned from Indiana University to accept an appointment as associate professor of economics at Iowa State University.

Howard R. Smith, of the University of Georgia, is at Harvard University on a joint General Education Board—Harvard University fellowship, making an intensive study of teaching methods at the Harvard Business School.

Roger F. Smith has been appointed instructor in economics at Alabama Polytechnic Institute.

Spencer M. Smith, formerly of the University of Kansas, has accepted a position as assistant professor of economics at the University of Minnesota.

Victor E. Smith, formerly of Brown University, has been appointed associate professor of economics at Michigan State College.

Arthur Smithies has been appointed professor of economics at Harvard University.

Edward W. Smykay has been appointed instructor in economics and business administration at the University of Maine.

Frank A. Southard, Jr., has resigned as chairman of the department of economics, Cornell University, to become associate director, in charge of the International Group, of the Division of Research and Statistics of the Board of Governors of the Federal Reserve System.

J. H. D. Spencer is an instructor in economics at the University of North Carolina.

Richard C. Spencer has accepted a professorship in political science at Coe College.

Herbert G. Spindler has been named assistant research professor of marketing in the department of agricultural economics, at University of Massachusetts.

Reilly C. Sprowls has been appointed teaching assistant in the School of Business, University of Chicago.

Jack Stieber has been appointed instructor in economics at the University of Minnesota.

Leo R. Stone has resigned as an officer of the First National Bank of Cincinnati to become an instructor in business law at Ohio State University.

R. P. Stovall has resigned as assistant professor of economics at the University of North Carolina.

James H. Street has been appointed assistant professor of economics at Haverford College.

Richard K. Stuart has been appointed assistant professor of economics and business administration at the University of Maine.

Freeman F. Suagee has been appointed assistant professor of labor relations in the College of Business Administration, University of Cincinnati.

Sidney C. Sufrin has been promoted to the rank of professor in the College of Business Administration and in the department of economics, Maxwell School of Citizenship and Public Affairs, Syracuse University.

C. Meryl Sullivan is assistant director of research, National Association of Broadcasters, Washington, D.C.

Janet Sundelson is on leave of absence from Barnardo College in the current year.

Glenn Sutton has rejoined the staff of the University of Georgia as director of the Savannah Division of the University.

Ernst R. Swanson, formerly of Butler University, has been appointed professor of economics in the School of Business Administration at Emory University.

V. V. Sweeney has resigned as assistant professor of economics at the University of Florida to take a position with the Traveler's Insurance Company in Hartford, Connecticut.

Zenon Szatrowski has accepted an appointment as associate professor at the University of Oregon.

Robert Tannenbaum, formerly assistant professor of industrial relations in the School of Business, University of Chicago, has accepted an appointment as lecturer in the College of Business Administration, University of California, Los Angeles.

Donald J. Tate is an instructor in management in the School of Business, University of Utah.

Elton TeKolste has resigned from the College of Business Administration, University of Nebraska, to accept an appointment as instructor at the University of Michigan.

Lionel W. Thatcher has accepted an appointment as head of the department of business organization and administration at the University of Maryland.

C. C. Thompson is a part-time instructor in economics at the University of North Carolina.

Douglas N. Thompson is an instructor in economics in the School of Business, University of Utah.

M. Fred Tidwell has resigned from San Jose State College to accept an appointment as associate professor of business education at the University of Washington.

Minnie Tracy has resigned from Wittenberg University to become an associate professor of marketing at Drake University.

Marvin Tummins is an instructor in accounting at Louisiana State University.

Roger C. Van Tassel has been appointed instructor in economics at Brown University.

Peter N. Vukasin has been appointed lecturer in economics at the University of California, Berkeley.

Raymond F. Wallace has resigned from Northwestern University to accept a position at the University of Kansas as associate professor of industrial management.

J. Edward Walters, formerly president of Alfred University, has been appointed pro-

fessor of management and industrial relations at the Amos Tuck School of Business Administration, Dartmouth College.

L. P. Webster is an instructor in accounting at Louisiana State University.

Charles A. Welsh, recently of the University of Texas, is associate professor of economics in the College of Arts and Sciences, American University.

Lawrence L. Werboff has been appointed acting instructor in economics at Stanford University for the spring quarter of the academic year 1948-49.

Henry F. White has resigned as head of the Division of Economic and Social Studies, John Brown University, to accept an appointment as professor in the School of Business Administration, Bradley University.

Thomson McL. Whitin has been appointed assistant in instruction in the department of economics and social institutions of Princeton University.

Jack A. Wickert has been appointed assistant professor of marketing in the School of Business, University of Kansas.

Barbara Willett has been appointed part-time instructor in economics at Brown University.

William V. Wilmot, Jr., has been promoted to the rank of assistant professor in the department of economics at the University of Wisconsin.

Lawrence W. Witt has been appointed chairman of the agricultural economics section of the department of economics at Michigan State College.

Edwin E. Witte, chairman of the department of economics at the University of Wisconsin, has been appointed a member of the President's Commission on Labor Relations in Atomic Energy Installations.

John A. Wolfard is associate professor of economics in the School of Business, University of Utah.

Anne Wolfshohl is now instructor in economics at Carnegie Institute of Technology.

Paul J. Woodman has been appointed lecturer in business law in the School of Business Administration, University of Buffalo.

T. W. Wyatt has been appointed instructor in business law at the University of Florida.

Louis Yagoda has been appointed lecturer in industrial relations in the School of Business Administration, University of Buffalo.

Elmer R. Young is assistant professor of accounting in the School of Business, University of Utah.

James R. Young, of Louisiana State University, was a visiting instructor in the 1948 summer session of Indiana University.

Willard H. Young has been appointed assistant professor of business organization and management in the College of Business Administration of the University of Nebraska.

VACANCIES AND APPLICATIONS

The Association is glad to render service to applicants who wish to make known their availability for positions in the field of economics and to administrative officers of colleges and universities and to others who are seeking to fill vacancies.

The officers of the Association take no responsibility for making a selection among the applicants or following up the results. The Secretary's Office will merely afford a central point for clearing inquiries; and the *Review* will publish in this section brief descriptions of vacancies announced and of applications made. It is optional with those submitting such announcements to publish name and address or to use a key number.

Communications should be addressed to: The Secretary, American Economic Association, Northwestern University, Evanston, Illinois.

Vacancies

Money and banking, business cycles, principles of economics: Old, established liberal arts men's college in East needs instructor in January, 1949, to teach money and banking, business cycles, and principles of economics. Salary $2,600 to $3,00 for academic year. Want at least an M.A. degree and would like a man who has completed most if not all of work for Ph.D. P134

Economists Available for Positions

Economic theory, money and banking, cycles, labor, management, motion and time study, consumer economics: Man, 38, Ph.D., Northwestern University. Twelve years of varied teaching experience; 2 years as research consultant; 2 years as assistant dean in small college; published articles, a book nearing completion. Now teaching, but avaliable for permanent appointment February or September, 1949. Desires teaching position, with or without administrative duties. Rank and salary depend on nature and location of university or college. E180

Economic principles, labor economics, money and banking, public finance and economic history: Man, 34, married, completing doctoral dissertation. Government and teaching experience in courses listed; now head of department in junior college. E214

Business, social and industrial psychology, human relations: Man, mature age, Ph.D. Outstanding references; employed; desires advancement. Available on short notice. E245

International economics, principles of economics, money and banking, national income, public finance, business law: Man, 40, Ph.D., University of Frankfurt (Main); U. S. citizen. Eight years of experience as economist with U. S. government agencies and with leading private economic research organization; now teaching at Eastern college. Available in February, 1949. E255

Public finance, advanced accounting, economic theory, labor, money and banking, statistics, agricultural economics: Man, 29, M.A., completing Ph.D. requirements. Employed last 2 years as taxation and financial economist to occupation commanders, Korea, Okinawa, and Japan; part-time teacher of economics, Far East; research work at university in public finance and labor; 9 months with research organization for state governments; short period as regional economist with Chicago office of OPA before present duties. Publications. Primarily interested in research and/or administrative work involving fields above with university or business firm. Would consider teaching or teaching-research position with good future prospects. E256

Accounting, economics, business administration: Man, 43, married, Ph.D. Twenty years of college and university teaching experience. Now full professor in accredited Eastern institution. Wife, 41, Ph.D., with 15 years of teaching experience in secondary education, psychology, and commercial teacher training. Professor in same institution. E273

Principles of economics, industrial administration, industrial relations: Man, single, B.A., candidate for M.B.A., New York University. Teaching experience on college level in principles of economics and industrial administration; business experience in financial counseling and production control work. Seeks teaching or research position. E270

Economic theory, business cycle and monetary theory, public finance, international economics, comparative economic systems: Man, 30, married, Ph.D. residence completed, completing dissertation. Four years as economist with leading research organizations; brief teaching experience. Seeks teaching or research position, West Coast preferred. Available in spring, 1949. E278

Trade cycle theory, principles of economics, intermediate and advanced theory, history of economic thought, international trade and monetary theory: Man, 28, married, Ph.D. (Econ.), L.S.E. Offered permanent position at London School of Economics. Dissertation being prepared for publication; teaching experience. Desires teaching or teaching-research position with good prospects. Available in September, 1949. E281

Economic theory, industrial relations, academic administration: Man, 43, married, M.A., Ph.D.,; 4 years, dean, college of economics and business administration, Southern university; training administrator U.S.A.A.F. during World War II; 5 years as administrative analyst, federal government; presently employed in midwestern college; desires to return to academic administration or full professorship in industrial relations in larger institution, preferably in South or Southwest. Publications; book now under contract. Available in February or September, 1949. E282

International economic problems, money and banking, principles of economics, advanced economic theory, history of economic doctrines, comprarative economic systems: Lady, single, Ph.D. (summa cum laude), University of Basle. International background, many languages, studied in Vienna and Switzerland. Outstanding teaching experience: 20 years as lecturer at Geneva University, Switzerland; 2 years successful teaching in this country on a graduate and undergraduate level, East and West. At present head of department of economics in Western liberal arts college. Substantial research work; author of several books and numerous contributions to scientific periodicals; collaborator, *Encyclopaedia of the Social Sciences;* president of Commission on Economic History at *Congres international des Sciences Economiques,* Paris, 1937. Desires full or visiting professorship in economics in university or high-ranking college or collaboration with bureau of economic research. Available for summer school. Outstanding American and European references. E283

Business and finance: Man, 32, single; no formal education. Keen student of fundamental statistics (a method of analysis of business cycles where the human element is inherently associated with the forecast of demand and supply), social philosophy and psychology. Broad experience. Available as secretary-administrative assistant, preferably with an industrialist or banker. Present employed as a secretary with a government agency in Washington, D.C. E284

Principles of economics, personnel administration, labor economics, industrial relations: Man, 29, single, M.A., Columbia University (48 graduate credits). Three years of Air Force teaching experience in personnel administration and classification. Desires teaching or research position. Available immediately; write full particulars. E285

Advanced economic theory of monopolistic competition, cartels, public utilities, Scandinavian economy: Man, 32, married, gold medal from University of Copenhagen, Scandinavian doctor's degree expected with certainty within a few months. Now associate professor; from January 1, 1949, professor. Five years of graduate teaching in subjects mentioned; postwar Rockefeller fellow at Harvard; fine reference there. Numerous articles in Scandinavian and American scientific journals. Perfect mastery of the English language; writing and speaking knowledge of German. Native of Denmark, desires to leave Europe and to lecture and do research work in fields mentioned, preferably in Northern parts of the U. S. Available at any time. E286

NOTICE TO MEMBERS

In order to [illegible] the remaining copies of *Economic Essays in Honor of John Bates Clark*, a special price of $1.00 a copy will be given to members of the Association. Former price, $2.69. Orders should be sent to

The Secretary
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